



Lobed Mixer Design for Noise Suppression

Plume, Aerodynamic and Acoustic Data

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Note that at the time of research, the NASA Lewis Research Center was undergoing a name change to the NASA John H. Glenn Research Center at Lewis Field. Both names may appear in this report.

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Preface

The final report is written in two volumes. In the first volume we present the design philosophy of the new lobe mixers tested, and then analyze the results of various acoustic and aerodynamic tests done at NASA Lewis Research Center, Cleveland,

Ohio and Aero Systems Engineering Fluidyne Laboratories, St. Paul, Minnesota over a period of three years (1995-1997). The second volume is a compilation of data from the plume survey and the aerodynamic data for the acoustic tests.

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Guide to Plume Survey Data as plotted in Vol. 2 (parts 1, 2) and FluidDyne Tests*

| MIXER | T.O. # 1 | | | | | | | | | | T.O. # 2 | | | | |
|---------------|----------|----------|-------------------|---|--------|-----------------|------------------------|-----------|-------------------|----------------------------------|------------|--|--|--|--|
| | Velocity | | Total Temperature | | C.L.** | | Velocity | | Total Temperature | | C.L.** | | | | |
| | x/D=0.2 | 1 | >1.0 | 0.1 | 0.2 | 0.5 | 1 | >1.0 | 0.2 | 0.5 | 1 | >1.0 | | | |
| CONF | | | | FD(M=0)* 8 (M=0.1) 27(M=0.1) 29(M=0.1) | | 28(M=0.1) | 30(M=0.1) 31(M=0.1) | 45(M=0.1) | | | | | | | |
| 12CL 100%L | 12 13 | 20 | 1 | FD(M=0)* 9(M=0.1) 32(M=0.1) | | 33(M=0.1) 36 | 34(M=0.1) 35(M=0.1) | 45(M=0.1) | 15 33 | 24 34 35 | 2.5 17* | | | | |
| 12CL 50%L | | | 1 | | | | | | 14 | | | | | | |
| 12UH | | | | FD(M=0)* 10(M=0.1) 37(M=0.1) | | 38(M=0.1) | 39(M=0.1) 40(M=0.1) | 45(M=0.1) | | | | | | | |
| 12TH | 18 | | 1 | | | | | | 61 12* | | | 65 14*, 23* | | | |
| 16UH | | | 3 (M=0) | FD(M=0)* 41(M=0.1) 11(M=0.1) | | 42(M=0.1) | 43(M=0.1) 44(M=0.1) | 45(M=0.1) | | | | | | | |
| 20UH | | | 1 | | 25* | | | | 61 12* | | | | | | |
| 20DH | 9 10 | 19 10 | 1 | 63 24* | | | | | 11 26 | 27 28 29 30 31 32 | 2.4 17* | 64, 66 67 68 69 70 71 72 | | | |
| | | | | | | | | | | | | | | | |

Notes: * Plume survey figure numbers are for free-jet Mach no. (M) of 0.2 unless mentioned; Light References = Figure nos. in Part 1, Vol. 2;
 Bold references = Figure nos. in Part 2, Vol. 2 FD = 1995 FluidDyne surveys: All Temperature surveys are at nozzle-exit plane;
 FluidDyne tests also have total pressure survey plots at the mixer exit plane for the same conditions as the corresponding total temperature surveys
 ** C.L. = Center-Line Traverse
 * = Non-dimensional

Guide to Plume Survey Data as plotted in Vol. 2 (parts 1, 2) and FluidDyne Tests

| MIXER | T.O. # 3 | | | | Cruise | |
|---------------|---------------------|----------------------------|------------------------------------|------------------------------------|----------------------------------|--|
| | Velocity 0.2 0.5 | 1 | >1.0 C.L." | Total Temperature 0.2 0.5 C.L." | Total Temperature Nozzle-Exit | |
| CONF | | | | | FD(M=0)* | |
| 12CL 100%L | 17 16 40 | 23 22 42 | 2,8 18* 43 44 45 46 | 1 19* 5 15* | 15* FD(M=0)* | |
| 12CL 50%L | 47 48 | 49 50 51 52 53 | 2,7 | 2 20* 6 15* | | |
| 12UH | | | | | FD(M=0)* | |
| 12TH | | | | 3 21* 4 15* | | |
| 16UH | | | | | FD(M=0)* | |
| 20UH | | | | | | |
| 20DH | 54 21 55 | 56 57 58 59 | 2,6 18* | 7 22* 15* | | |

Part 1
Plume Survey Data

Von D. Baker

SUMMARY

During December 1996 and 1997, exhaust plume survey measurements were taken on several scale models of Rolls-Royce Allison exhaust acoustic mixer designs with the objective of reducing the take-off and approach noise signature of advanced civil turbofan engines. The plume data was plotted and analyzed for Rolls-Royce Allison by Allison Advanced Development Company (AADC) from the NASA data files transmitted to Rolls-Royce Allison.

These tests were conducted at the NASA-LeRC as part of the AST program under contract NAS3 27394, Task Order 6. The purpose of this report is to present the plume data analysis of immediate interest to Rolls-Royce Allison Acoustic Design Group. Additional plume data analysis is also provided in Part 2. Data plots and pertinent comments are presented in the following order:

1. Plume Velocity Data Plots
 - 1.1 Maximum "centerline" velocity decay
 - 1.2 Selected velocity profiles at $x/D=0.2$
 - 1.3 Selected velocity profiles at $x/D=1.0$
 - 1.4 Selected velocity profiles at all x/D values from 0.2 to 10.0
 - 1.5 Typical "Jet Wake Diagram"
2. Plume Total Temperature Data Plots
 - 2.1 Maximum "centerline" Tt decay
 - 2.2 Selected Tt profiles at $x/D=0.2$
 - 2.3 Selected Tt profiles at all x/D values from 0.2 to 10.0
3. Conclusions

1.0 Plume Velocity Data Plots

Selected plume velocity data plots are presented as shown in Figures 1 to 59. The plume velocity was calculated by NASA from the measured total pressure (Pt), static pressure (Ps) and total temperature (Tt) values at each measurement step taken in the plume. From isentropic flow equations, the sonic velocity and local Mach number at each step was calculated and then converted to the local plume axial velocity in ft/sec.

A simplified sketch of the NASA traversing rake assembly and measurement axis definition is shown in Figure A. The rectangular array traversing rake assembly consisted of one vertically aligned set of Pt rakes, one vertically aligned set of Tt rakes, and two vertically aligned sets of Ps taps, all aligned in the "Z" direction. In operation, the array was positioned at different axial distances from the nozzle exit plane, or x/D values, and then traversed across the plume using a motorized drive. The "x" value is the axial distance in inches and "D" is the nozzle exit diameter of 7.250 inches nominally.

The x/D values varied from a minimum of 0.2 to a maximum of 10.0. A full survey consisted of x/D values of 0.2, 0.5, 1.0, 3.0, 5.0, 7.5, & 10.0. At each x/D location either a "full" traverse or partial traverse of the "center" region (or lateral sweep) by the rectangular array across the plume was made in 1/4" steps in the "Y" direction. The data was acquired in an over-lapping manner such that a corresponding measured Pt, Tt, and Ps value was obtained for each data point location in the Y-Z measurement plane.

A "full" survey typically swept from left to right a "Y" distance of -4.75 inches to +4.75 inches from the center of the array. In order

to conserve testing time, a "center" traverse was also used for several x/D values that would typically vary from -0.75 inches to +0.75 inches. The vertical or "Z" sweep was constant at -5.00 inches to +5.00 inches, with 1/4 inch spacing between adjacent probes, in all cases being defined by the spacing built into the array.

The respective fan and core nozzle pressure ratios (NPR) and total temperature ratios tested were selected to simulate different take-off thrust settings of an advanced turbofan engine for two typical aircraft installation cycles, referred to as the "F" and "G" cycles, and a growth engine cycle, referred to as the "H" cycle. The test conditions are summarized in Table I. To simplify the discussion, the test conditions are hereafter referred to by the core NPR value.

A free stream take-off Mach number of 0.2 was simulated by placing the test mixers inside a large circular pipe which discharged ambient air over the mixers to simulate forward flight effects.

The 1996-97 NASA plume tests included the five mixers listed in Table II. Due to testing problems, it was not possible to test all mixers over the same range of test conditions. Also, all mixers were tested with a common baseline exhaust nozzle with a reference or "100%" mixing length. The 12 lobe baseline mixer (12CL) was also tested with a shortened "50%" length nozzle of reduced mixing length.

1.1 Maximum "centerline" velocity decay

Figures 1 through 8 were plotted from the data files for selected mixer configurations. These plots show the decay of the maximum profile velocity at each x/D value tested, normally from x/D of 0.2 to 10.

The maximum velocity was obtained by visually scanning the velocity data file for each x/D value data set. In most cases, as expected, the maximum velocity was found to be at the center of the array which was intended to coincide with the nozzle centerline location. In some cases, the maximum velocity was found to be located at a slightly off-center location in the array. This off-setting of the profile may be due to a shift in the alignment of the instrumentation array relative to the nozzle centerline, when the nozzle is flowing.

Figure 1 compares the maximum velocity decay for each mixer at the 1.39 core NPR condition. In general, all of the mixers exhibit a constant maximum velocity core length of about 1 diameter, except the 12 lobe baseline mixer (12CL) with 50% nozzle length. Beyond this length the core begins to decay at a somewhat linear rate when plotted on the logarithmic abscissa scale. The 20 lobe deep mixer (20DH) exhibits lower velocities than the other mixers; however, surprisingly, the 20 lobe unscalloped mixer (20UH) which was only tested up to x/D of 1.0 shows the lowest velocities.

Figure 2 shows the effect of the 1.54 and 1.74 core NPR schedule for the 12 lobe baseline mixer (12CL) and 20 lobe deep scalloped mixer (20DH). Trends similar to the data in Fig. 1 are noted; however, the velocity levels are increased which reflect the higher NPR schedules. Again, the 20 lobe deep scalloped mixer (20DH) exhibits the lowest velocities. Note that in both Figures 1 and 2, the plume velocity tends to converge to the same value for all mixers, at a given NPR schedule, at x/D of about 10. This suggests that the benefit of the mixer geometry in affecting the velocity decay diminishes beyond x/D of 10 and is

primarily controlled by approaching the ideal mixed velocity (conservation of mass, energy, and momentum) which is a function of the bypass ratio (BPR) and total temperature ratio of the fan and core stream.

Figures 3 through 8 show additional maximum "centerline" velocity plots at other selected conditions with trends similar to those noted above.

1.2 Selected velocity profiles at $x/D=0.2$

Figures 9 through 18 show typical velocity traverses at $x/D=0.2$ which was the nearest measurement x value to the nozzle exit plane. The vertical height, Z , plotted on the abscissa scale represents the probe locations, typically in 1/4 inch spacings, above and below the nozzle centerline. Thus, the true orientation of the velocity profile can be obtained by turning the plot 90 degrees such that the velocity scale is along the horizontal (centerline) direction.

Note that the nozzle exit diameter is 7.250 inches for all plots. Thus the location of the nozzle exit relative to the "Z" scale can be noted at a value of + and - 3.625 inches (the nozzle radius). Velocities outside the nozzle radius are thus indicative of the free stream flow conditions and boundary layer on the external diameter of the nozzle.

The plotted "Y" values represent the traverse location, in inches, of the rakes. Figure 9 shows a typical "center" survey with Y values from -0.75 inches to +0.75 inches on either side of the center meridian plane. Thus a Y value of 0.0 represents the plane containing the nozzle centerline. Figure 10 is the same condition as Figure 9 but shows a typical "full" survey in the Y direction with Y values from -4.75 to +4.75; however, for clarity some of the in between Y values were deleted. Figure 11

shows a "full" survey with the maximum number of Y values that can be plotted by Excel, in this case, from Y = -4.75 to Y = 3.75 (values from 3.75 to 4.75 were deleted due to plotting restrictions).

One way to understand the velocity profiles is to visualize a knife making parallel slices through a round cake. Thus near the edge of the cake (i.e., $Y = \pm 3.5$ inches) the "slices" are more narrow, parabolic shaped whereas a slice at the center diameter of the cake ($Y=0$) defines the maximum width of the cake. i.e., the plume.

It should be noted that since the data were taken in a rectangular array, as selected by NASA, a rectangular array or "slices" was therefore the most cost-effective way to plot the plume data. Some surface plots are also included.

The Y traverses at x/D of 0.2 show a relatively complex but basically symmetrical velocity profile about the nozzle centerline. Some general observations can be made by comparing the profiles in the following figures as shown in Table III

Referring to Figure 10, a relatively "flat" velocity profile is noted for the 20 lobe deep mixer (20DH) at around 800 ft/s, with a maximum velocity "peak" to just under 1000 ft/s occurring at the centerline. A more complex velocity profile is observed for the 12 lobe baseline mixer (12CL) in Figure 12, with a center "peak" and two basically symmetrical outer "peaks" with velocities from about 950 ft/s, dropping to a "trough" of around 750 ft/s and then increasing to the maximum centerline velocity of just over 1000 ft/s. A similar trend is noted in Figure 13 for the baseline mixer with 50% length nozzle except the corresponding peaks are about 50 ft/s higher suggesting less mixing with the shorter length nozzle. The tongue

mixer, Figure 18, exhibits a velocity profile characteristic between the 20 lobe deep mixer (20DH) and the 12 lobe mixer with less peaking observed on the outer two peaks, but about the same centerline velocity of just over 1000 ft/s.

The other plots in this section are for different NPR operating conditions and, in general reflect the same trends as noted above with the velocity levels increasing with increasing NPR values and conversely.

1.3 Selected velocity profiles at $x/D=1.0$

Figures 19 through 25 show the changes in the velocity profile at $x/D=1.0$. The main change in the profile, for a given NPR schedule, appears to be more mixing at the outer edge reflected by the tapering inwards of the outer profile towards the center with some small reduction in peak velocities compared to the profile at x/D of 0.2. Figure 20 shows this tapering in of the outer profile for the 12 lobe mixer (12CL) at 1.39 NPR)core, with a corresponding peak centerline velocity of about 1050 ft/s. Increasing the NPR)core value to 1.74 (Figure 23) resulted in peak centerline velocities approaching 1400 ft/s for the 12 lobe baseline mixer (12CL), dropping to around 1250 ft/s maximum for 1.54 NPR)core (Figure 24).

1.4 Selected velocity profiles at all x/D values from 0.2 to 10.0

Figures 26 through 59 show typical examples of the transformation of the velocity profile from x/D of 0.2 to x/D of 10.0 for several NPR operating conditions and mixers. In general, the profile decay is somewhat similar in each case in terms of profile shape transformation. The discreet effects of the mixer geometry on the plume velocity profiles can usually be discerned at

x/D values from 0.2 up to around 3.0 to 5.0. Beyond this x/D distance, the profiles show more similarity with less individualized profiles due to the mixer geometry.

Figures 41 through 46 show the profiles for the 12 lobe baseline mixer (12CL) as an example which show the coalescence of the three distinct velocity peaks at x/D of 0.5 (Figure 41), to the leveling off of the outer peaks at $x/D=3.0$ (Figure 43), to the "parabolizing" of the contour to one center peak at $x/D=5.0$ (Figure 44), and a gradual decreasing of the parabolic-shaped profile to a lower velocity level (Figure 46) at $x/D=10.0$. This general trend in the plume profile transformation occurred for all mixers with velocity levels changing with NPR levels as noted previously.

The symmetry of the velocity measurements, from the upper half to the lower half of the profile, generally show good agreement; i.e., the profile is observed to be basically "mirrored" within measurement accuracy from top to bottom. There are some exceptions to this, as, for example, shown in Figures 43 and 44. These figures show some "blips" in the velocity profile at $Z=3.0$ to 3.25 that is not the same "mirrored" shape as noted at $Z=-3.0$ to -3.25. It is noted that these blips occur at all Y values, at the same Z values of approximately 3 to 3.5, and this pattern also repeats at other x/D values and mixer types.

1.5 Typical "Jet Wake Diagram"

It is possible to use the velocity contour plots at each x/D value to construct what is referred to as a "jet wake diagram" for each mixer. Jet wake (or plume) diagrams are commonly included in the Military Specifications requirements for turbojet and turbofan engine model specifications to depict the extent of the engine exhaust

velocity and temperature decay at SLS maximum thrust operation, or other specified conditions.

The jet wake diagram shows lines of constant velocity (or temperature) decay as a function of the non-dimensional horizontal distance x/D , and vertical distance z/D (the same as r/D). Since the horizontal and vertical distance is non-dimensionalized to the same reference dimension, nozzle diameter, it is thus possible to "visualize" in proportion the plume velocity spreading rate and outer boundary when plotted in this manner.

Figure 60 shows a typical example of a velocity jet wake diagram for the 20 lobe deep mixer (20DH). This diagram was constructed using the velocity contour plots at each x/D value by determining the z values corresponding to the values of 200, 400, 600 ft/sec, etc. The z values were then non-dimensionalized to z/D for plotting vs. x/D . Curves drawn through each corresponding constant velocity point yields the final jet wake diagram. Similar diagrams could be constructed for other mixers or operating conditions if desired.

2.0 Plume Total Temperature Data Plots

The total temperature rake array, as shown in Figure A, was used to measure the T_t values in the exhaust plume, in degrees R, and was traversed across the plume as discussed previously in Section 1.0.

2.1 Maximum "Centerline" T_t Decay

Examples of maximum "centerline" total temperature plots are shown in Figures 61 and 62. These plots were generated in the same manner as the maximum velocity plots discussed earlier except the total temperature data files were scanned for a

maximum value, which, again, occurs at or near the nozzle centerline.

Referring to Figure 61 for 1.39 NPR)core and 2.34 T_t)core/ T_t)fan, the maximum T_t plots tend to exhibit the same characteristics as the maximum velocity plots, namely: an approximately linear decay (on logarithmic scale) at x/D values beyond 1.0; a merging of the plots at x/D approaching 10.0, and approximately 150 deg lower T_t , or advantage, for the 20 lobe deep mixer (20DH) compared to the 12 lobe baseline mixer (12CL) at x/D of 1.0.

This lower temperature advantage significantly diminishes at x/D of 10.0 where the data for all mixers tend to merge to the same T_t value which again illustrates the global effect of the ideal mixed temperature being a function of BPR and T_t)core/ T_t)fan (conservation of energy) rather than mixer type. As can be seen, however, the 20 lobe deep mixer (20DH) does enhance the mixing, by reducing maximum temperatures at a given x/D , in the very near field from the nozzle exit up to about x/D of 5.0 where the global effects begin to predominate and determine the "fully mixed" temperature decay.

Figure 62 shows the Maximum T_t decay for the 20 lobe deep mixer (20DH) at the higher 1.61 NPR condition. The trends, compared to the 20L data in Figure 61, are basically the same except the very near field T_t levels in Figure 62 are about 100 degrees R hotter reflecting the increased T_t) core temperature and other flow condition differences.

2.2 Selected T_t profiles at $x/D=0.2$

Figures 63 through 65 show typical total temperature "slices" through the plume at $x/D=0.2$ for the 20 lobe deep mixer (20DH) and internal tongue mixer (12TH). Referring

to Figure 63 for the 20 lobe deep mixer (20DH) at the 1.39 NPR)core condition, the Tt plots are characterized by a fairly significant evidence of mixing for "Z" heights greater than 1.0 inches. For "Z" values less than 1.0 inch the profile begins to peak with a very rapid temperature spike developing at the centerline ($Z=0$) indicating significantly reduced mixing within this zone.

Although the temperature spikes at the centerline are significant, the area within a 1 inch radius is less than 8 % of the nozzle exit geometric area, or conversely, 92% of the exit area has a significantly reduced, partially mixed, temperature.

Figure 64 shows a similar temperature profile for the 20 lobe deep mixer (20DH) at the 1.54 NPR)core condition. The centerline maximum Tt is approximately 150 R deg. hotter reflecting the increased thrust setting condition. Figure 65 shows the same condition for the internal tongue mixer (12TH). Note that the centerline maximum temperature is about 70 degrees hotter for the tongue mixer, and the outer temperature zone show two smaller temperature spikes at about 700 deg. R and a profile that is different than that shown for the 20 lobe deep mixer (20DH) in Figure 64.

2.3 Selected Tt Profiles at all x/D Values from 0.2 to 10.0

Figures 65 to 72 characterize the Tt profile for the 20 lobe deep mixer (20DH) at the 1.54 NPR)core condition at x/D values from 0.2 to 10.0, which illustrate significant temperature contour transformation as the plume undergoes mixing.

At x/D of 0.2, nearest the nozzle exit, the characteristics described above are repeated in Figure 66. At x/D of 0.5, the profile has

not changed significantly, except the maximum "centerline" temperature is observed to have shifted slightly off-center to a "Z" value of 0.25 inches.

At x/D of 1.0, Figure 68, the maximum temperature level continues to drop at the centerline, with a less noticeable change in the outer zones. Moving to x/D of 3.0 the mixing process causes a more significant "smoothing" of the outer zone with a very symmetrical, "bell" shaped profile being produced.

Moving on to x/D values of 5.0, 7.5 and 10.0, shown in Figures 70, 71 and 72 respectively, the smooth "bell" shaped profile continues to reduce at the center zone and spread outwards. The contour is observed to be, within measurement accuracy, fairly symmetrical and does not exhibit any non-symmetrical "blips" as noted earlier in the velocity profiles. It is noted that while the temperature profiles appear to be very symmetrical, the center of the profile is shifted slightly in the positive "Z" direction away from the nozzle centerline at x/D values of 0.5, 7.5 and 10.0, i.e., as seen in Figure 72. The reason for this shift is not known, but may be related to the shift observed previously in the velocity profiles.

3.0 Conclusions

1. The 1996-97 AST Mixer plume testing has generated a very significant data bank of plume measurements for several Rolls-Royce Allison acoustic mixers. A small portion of this data, showing representative trends, has been presented in this report, and other plots, of specific interest, can be generated as required in the future.

2. The plotted plume data show velocity and total temperatures that range from fairly

complex contours near the nozzle exit to more smoothly “parabolic” or “bell-shaped” contours at x/D values of 10.0 as the mixing process approaches a more fully mixed condition. The benefit of the mixer geometry in enhancing the mixing process is clearly shown by the reduced “core” length of the plume, typically about one nozzle diameter long, as compared to a classical, axisymmetric convergent nozzle where the core length is on the order of six to eight nozzle diameters long.

3. While the effect of the individual mixer geometric designs can be seen in the maximum centerline velocity and temperature values very near to the nozzle exit plane, i.e. at x/D values generally less than 1.0, the mixer individual “signature” effects are significantly reduced as the centerline decay values tend to merge for all mixers at x/D approaching 10.0 and are influenced by the global mixing effects dictated by energy conservation at the given BPR and total temperature ratio of the test condition.

4. The individual velocity and total temperature contours for all mixers show some general similarity as the contours are transformed by the mixing process with

increasing x/D position. In general, the profiles are symmetrical, from top to bottom, in the vertical measurement plane (as the “Y” value is traversed). Some symmetry anomalies were observed in the velocity profiles (in the “Z” plane) which may be due to bad probe data. Also, observed shifts in the maximum or centerline velocity and temperature values (“Y” value of 0.0) may be due to small misalignment between the hot nozzle and the plume rakes.

5. The plume survey data will be very useful in future comparisons to CFD results in evaluating the accuracy of predicted plume temperature and velocity profiles. Also, the plume data should be of value in the analysis of the corresponding acoustic data taken with each mixer. In particular, the velocity profiles at x/D of 0.2 may be useful in obtaining an integrated average velocity for use in correlating with the acoustic data. Further work should also be expended in comparison of this database with other published plume data for forced mixers, if available. This database may also be of use in the design of infra-red (I-R) suppression exhaust nozzles where rapid temperature mixing is required to reduce the I-R signature.

Table I Test Conditions for Mixer Plume Tests

| Condition | NPR)core | NPR)fan | Tt)core/Tt)fan | Mn)FS = (M(fj)) |
|-----------|----------|---------|----------------|-----------------|
| Cycle F | 1.39 | 1.44 | 2.34 | 0.2 |
| Cycle G | 1.54 | 1.61 | 2.62 | 0.2 |
| Cycle H | 1.74 | 1.82 | 2.79 | 0.2 |

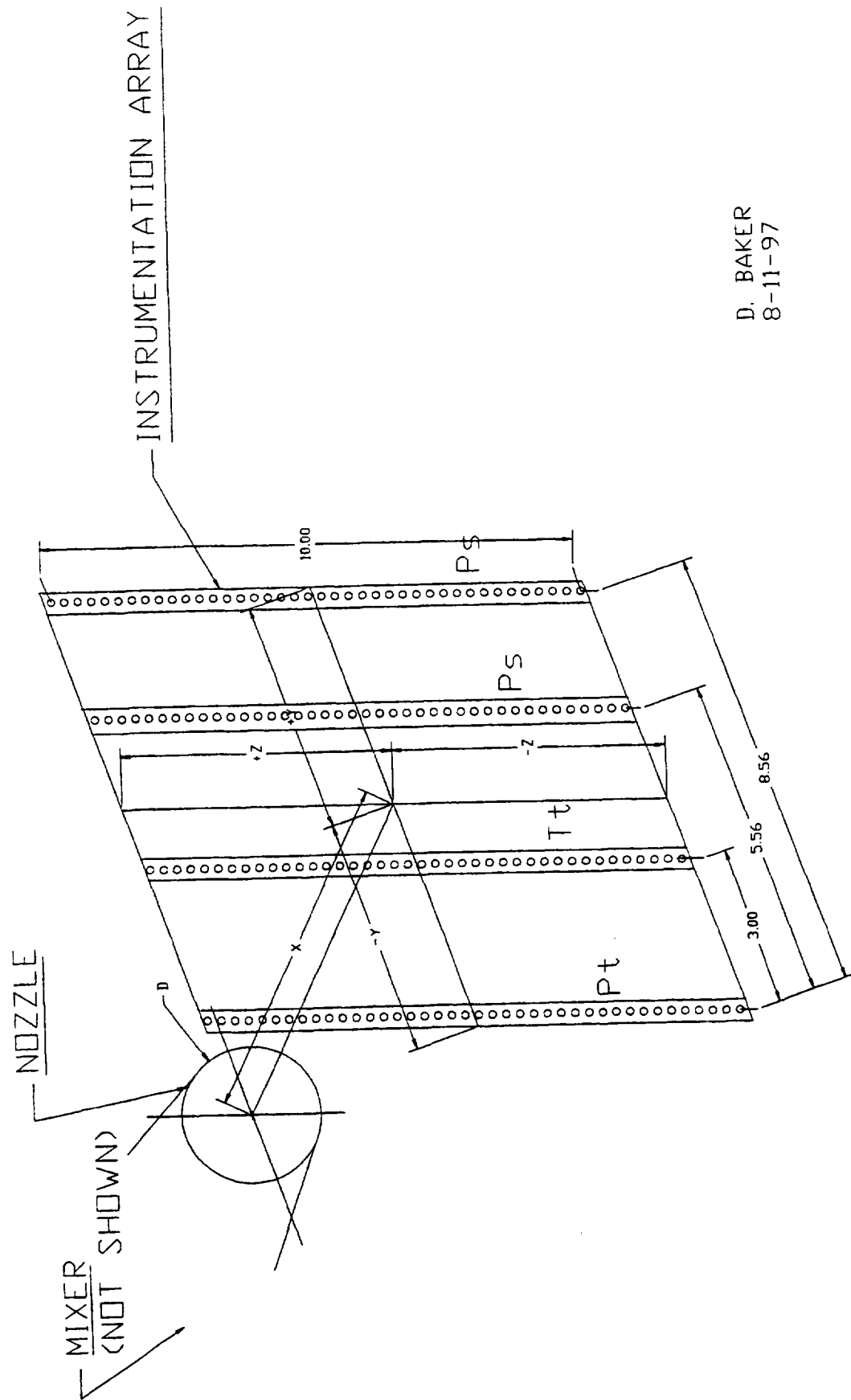
Table II 1995-96 Rolls-Royce Allison/NASA Mixers

| Mixer Description | Exhaust Nozzle Length | Comments |
|-------------------------------|-----------------------|-----------------------------|
| 12 lobe baseline (12CL) | 100% | With lobe sidewall cut-outs |
| 12 lobe baseline (12CL) | 50% | With lobe sidewall cut-outs |
| 20 lobe deep-scalloped (20DH) | 100% | Common lobe design |
| 20 lobe deep-scalloped (20DH) | 100% | Common lobe design |
| Internal tongue (12TH) | 100% | 12 pairs of tongues |

Table III Profile Comparison Examples

| Mixer/Nozzle | Test Condition | Figure |
|-------------------------------|----------------|--------|
| 20 Lobe Deep /100% L (20DH) | 1.39 NPR)core | 10 |
| 12 Lobe B'Line/100% L (12CL) | 1.39 NPR)core | 12 |
| 12 Lobe B'Line/50% L (12CL) | 1.39 NPR)core | 13 |
| Internal Tongue/100% L (12TH) | 1.39 NPR)core | 18 |

FIGURE A TRAVERSING RAKE SKETCH
& AXIS DEFINITION



D. BAKER
8-11-97

Figure 1 Comparison of maximum (center-line) velocity decay for several mixers at TO#1 and $M(fj) = 0.2$.

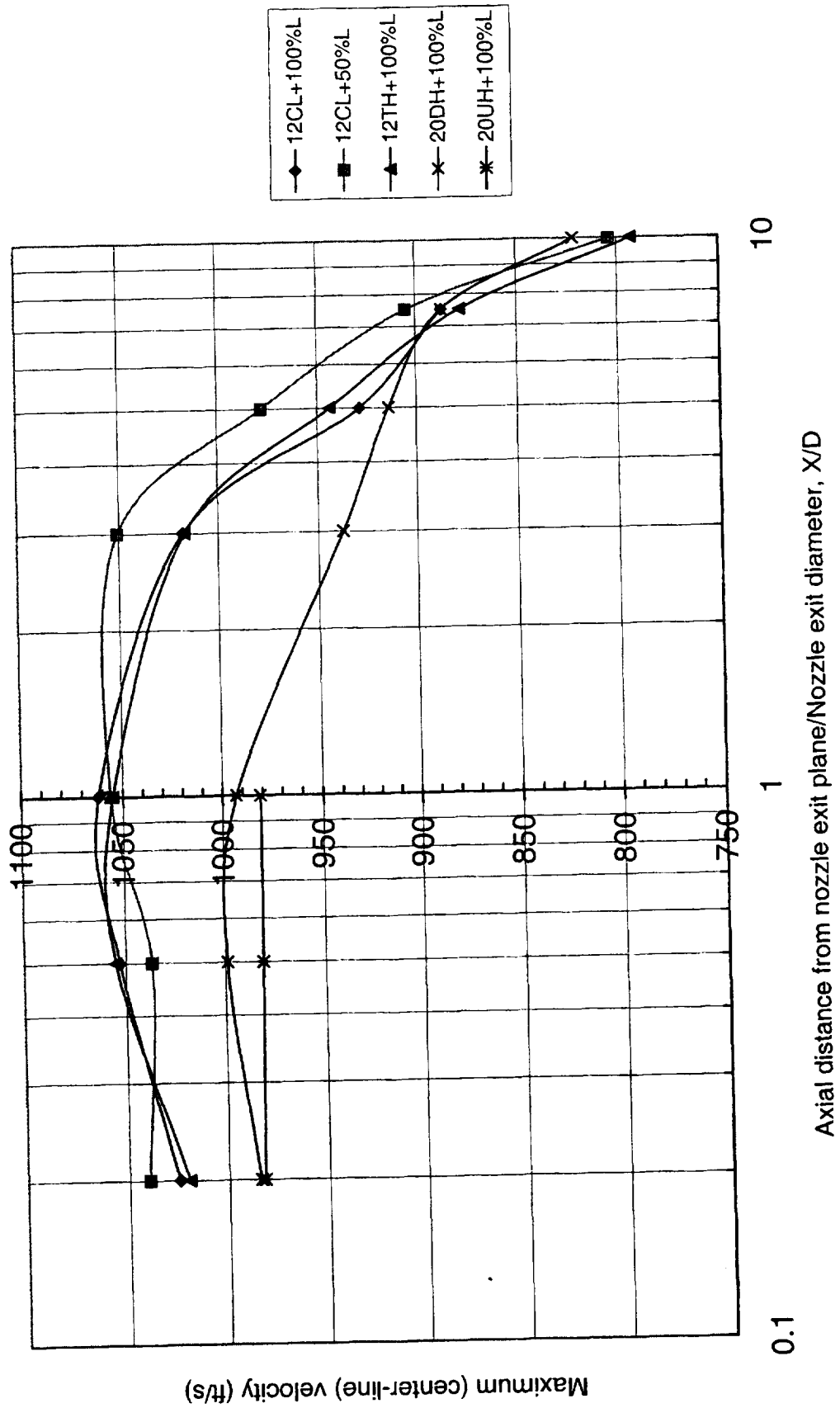


Figure 2. Comparison of maximum (center-line) velocity decay for 12CL and 20DH mixers at TO #2 and TO #3 at $M(fj) = 0.2$

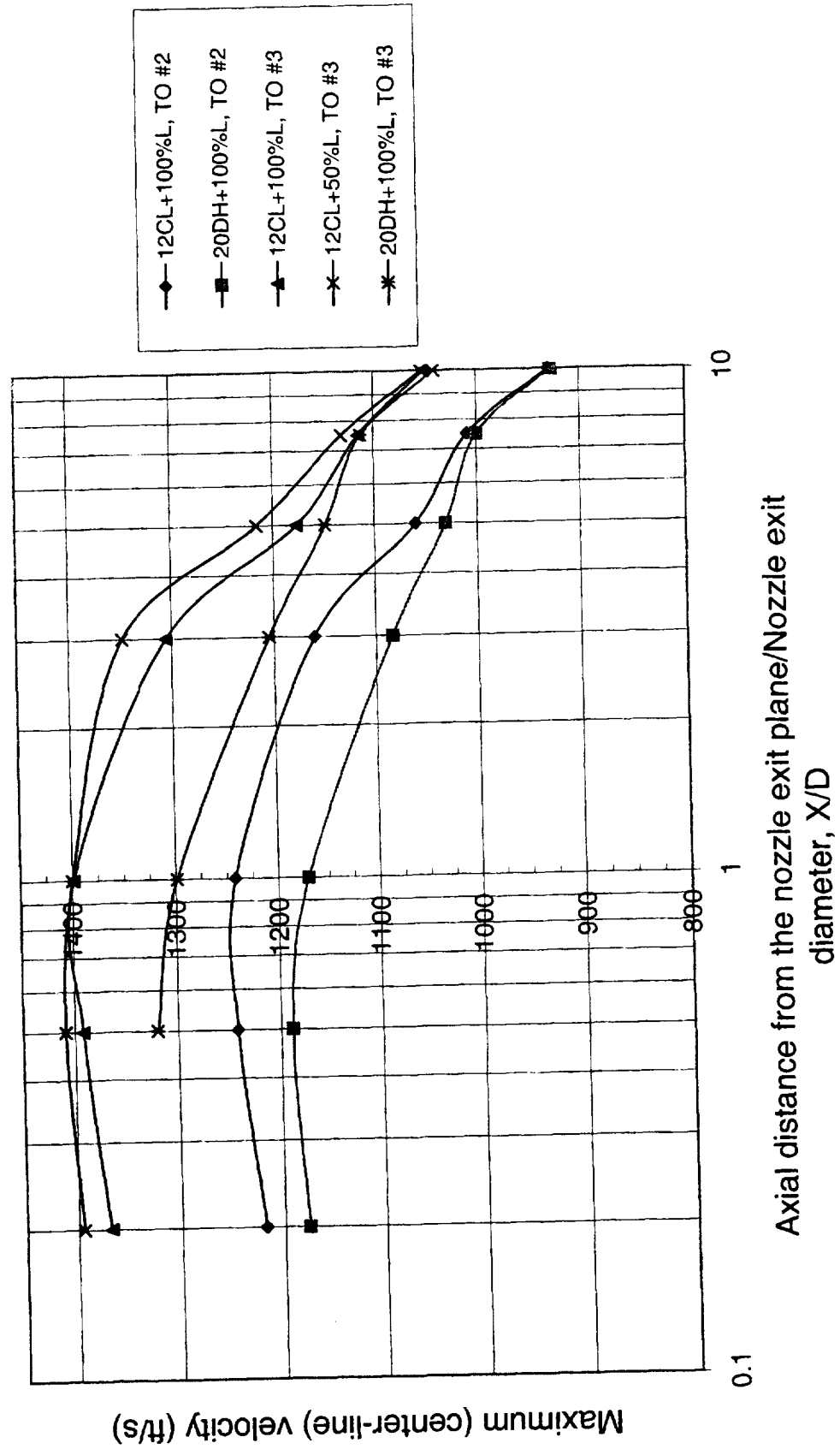


FIGURE 3

Internal Tongue Mixer - Maximum "Near Centerline" Plume Velocity Decay - 1996 Nasa Tests -
100% Nozzle Length, 1.39 NPR)c, 1.44 NPR)f, 2.34 Tt)h/ Tt)c, 0.0 Mn)FS

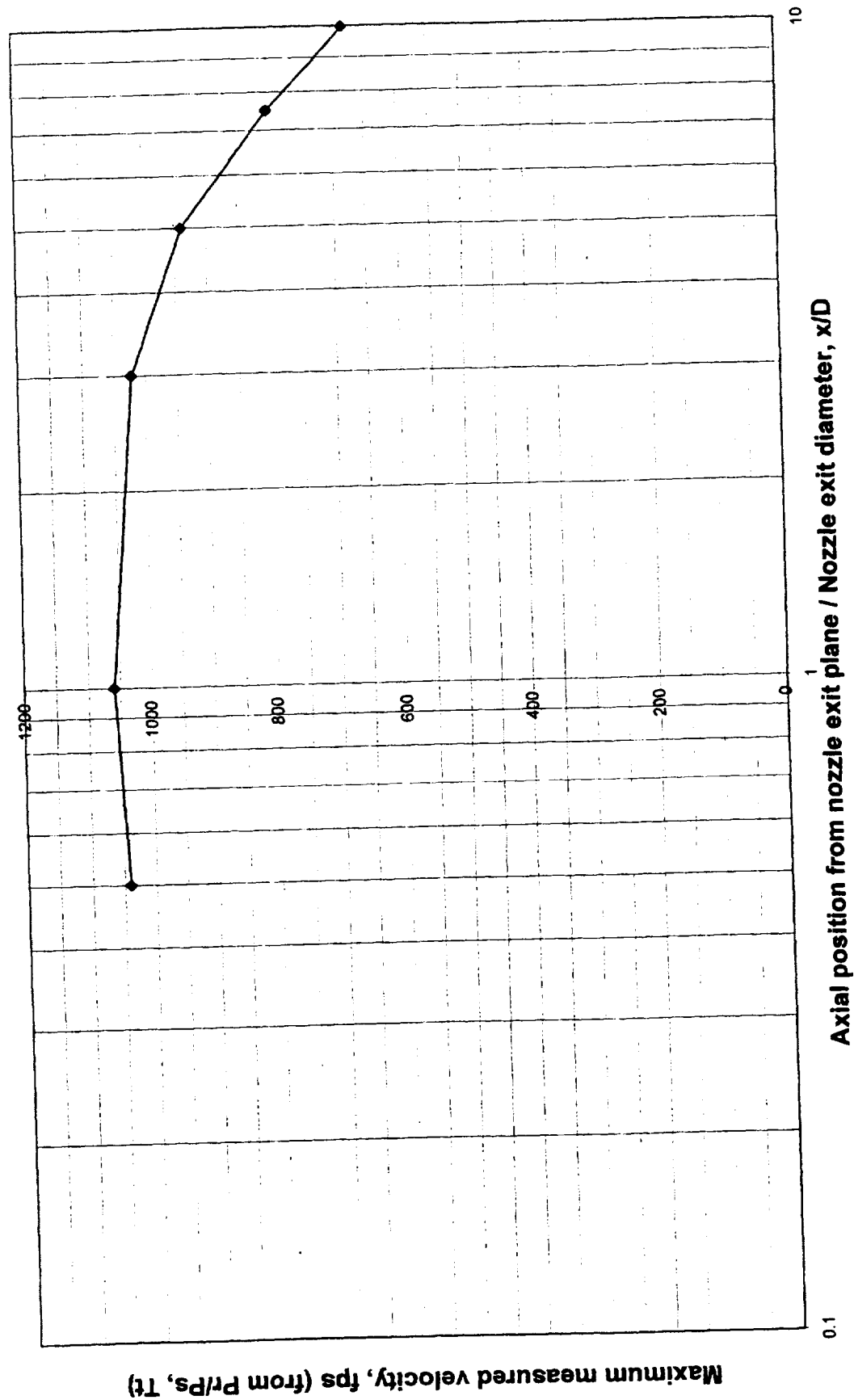


FIGURE 4

Maximum "Centerline" Velocity Decay, 20L Deep Mixer, 100% Nozzle Length, 1.54 NPR)core,
 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests
 Rdg #'s V547, V548, V549, V558, V561, V559, V560

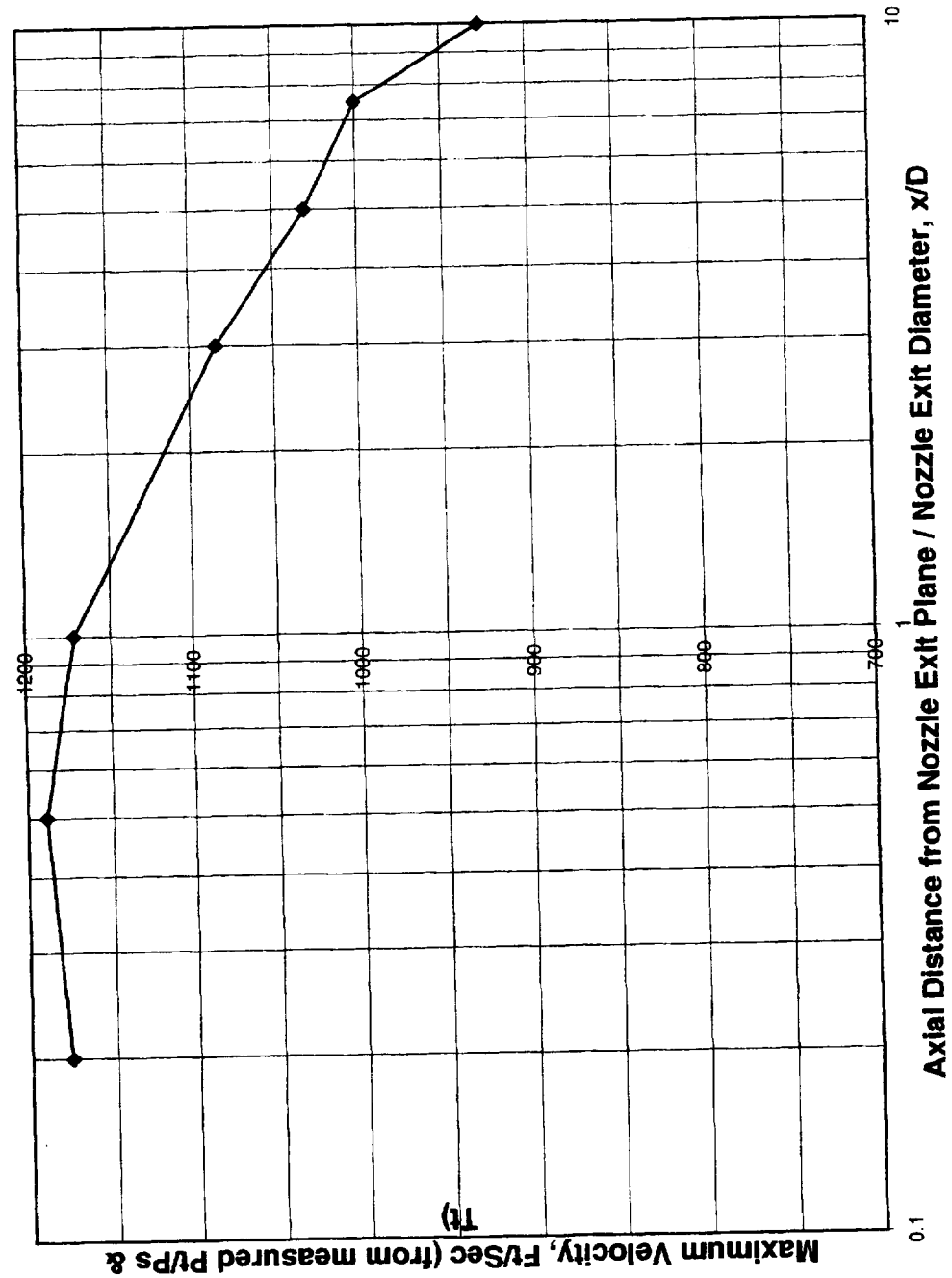


FIGURE 5

Maximum "Centerline" Velocity Decay, 12L Baseline Mixer with Cutouts, 100% Nozzle Length,
 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core(Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic
 Mixer/Plume Tests Rdg #'s V575, V573, V574, V572, V571, V570, V569

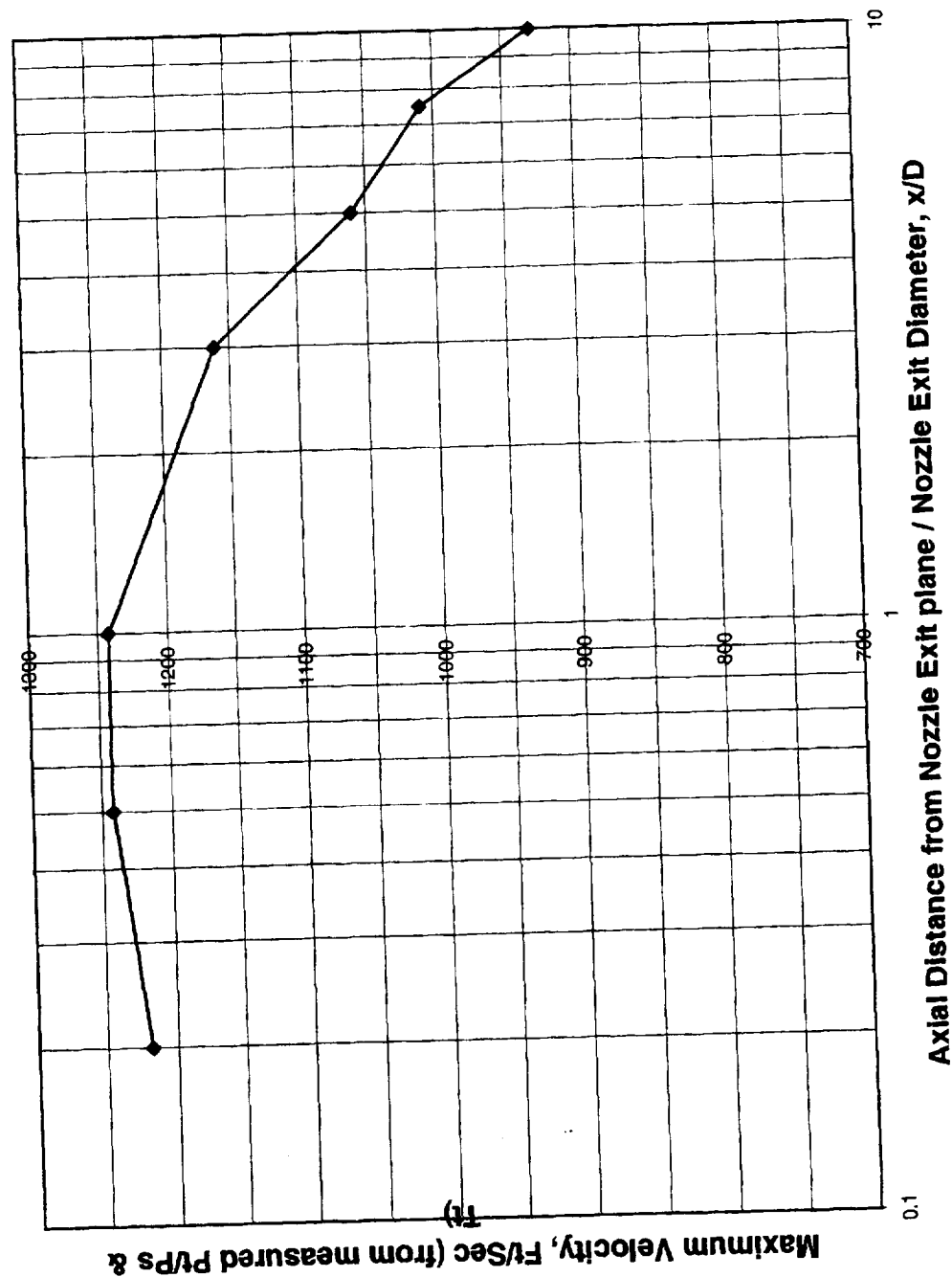


FIGURE 6

Maximum "Centerline" Velocity Decay - 20 Lobe Deep Scalloped Mixer - 100% Nozzle Length -
 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS -Rdg #s V541 to V546 - 1996 NASA-
 LeRC Acoustic Mixer Plume Tests

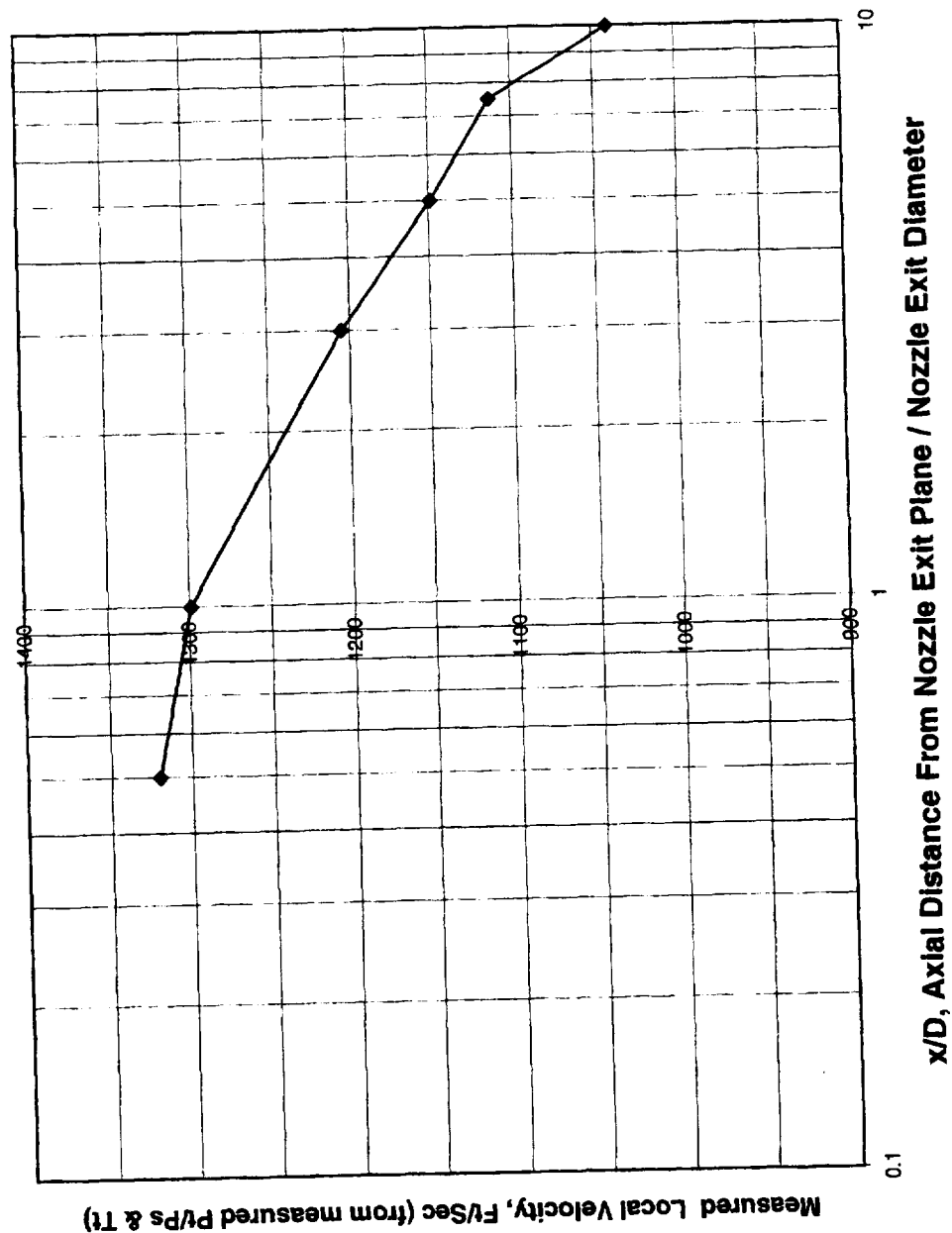


FIGURE 7

Maximum "Centerline" Velocity Decay, 12L Baseline Mixer w 50% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg #s V597 to V603

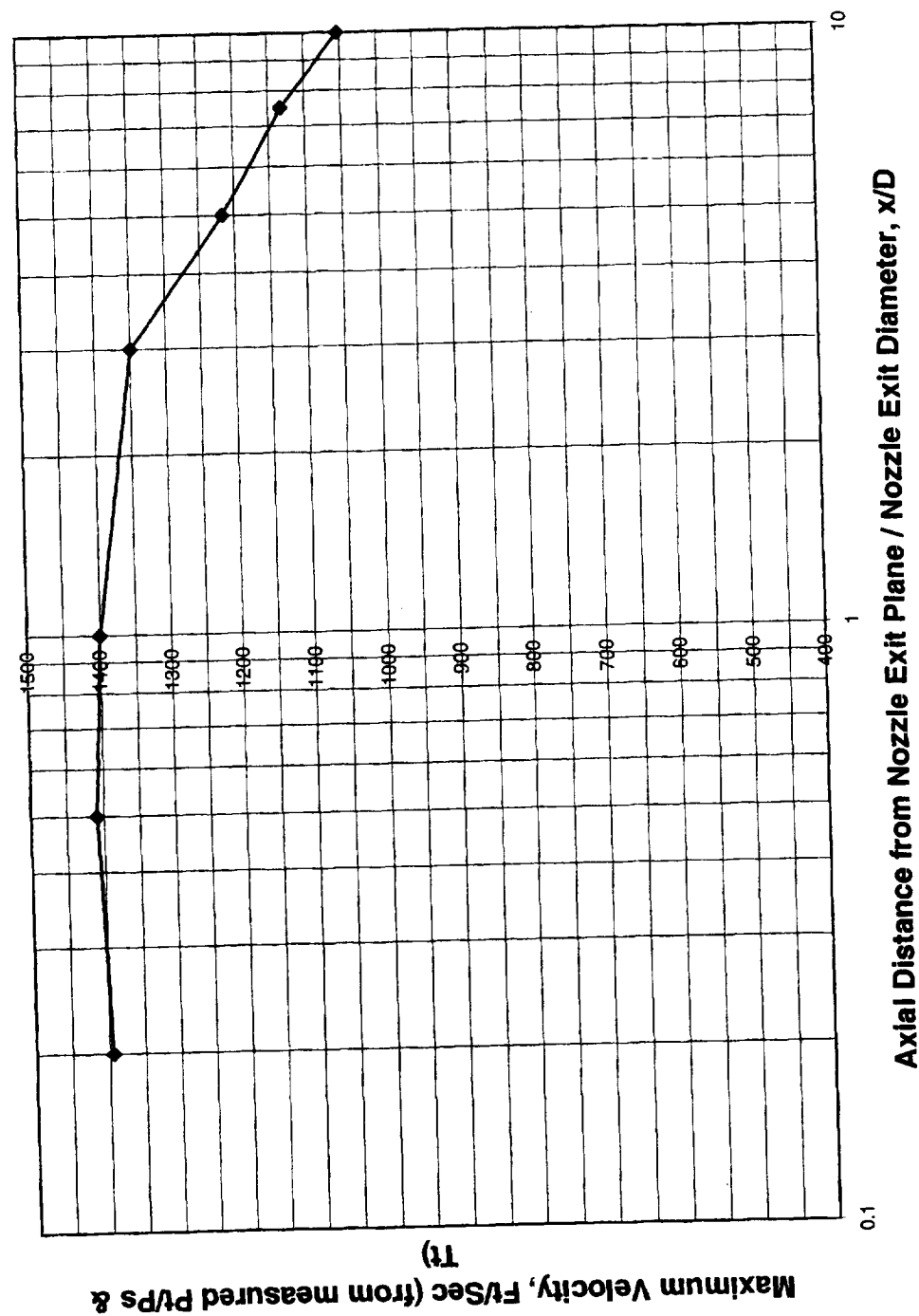


FIGURE 8

Maximum "Centerline" Velocity Decay, 12L Baseline Mixer w/ 100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg #s 576 to 582

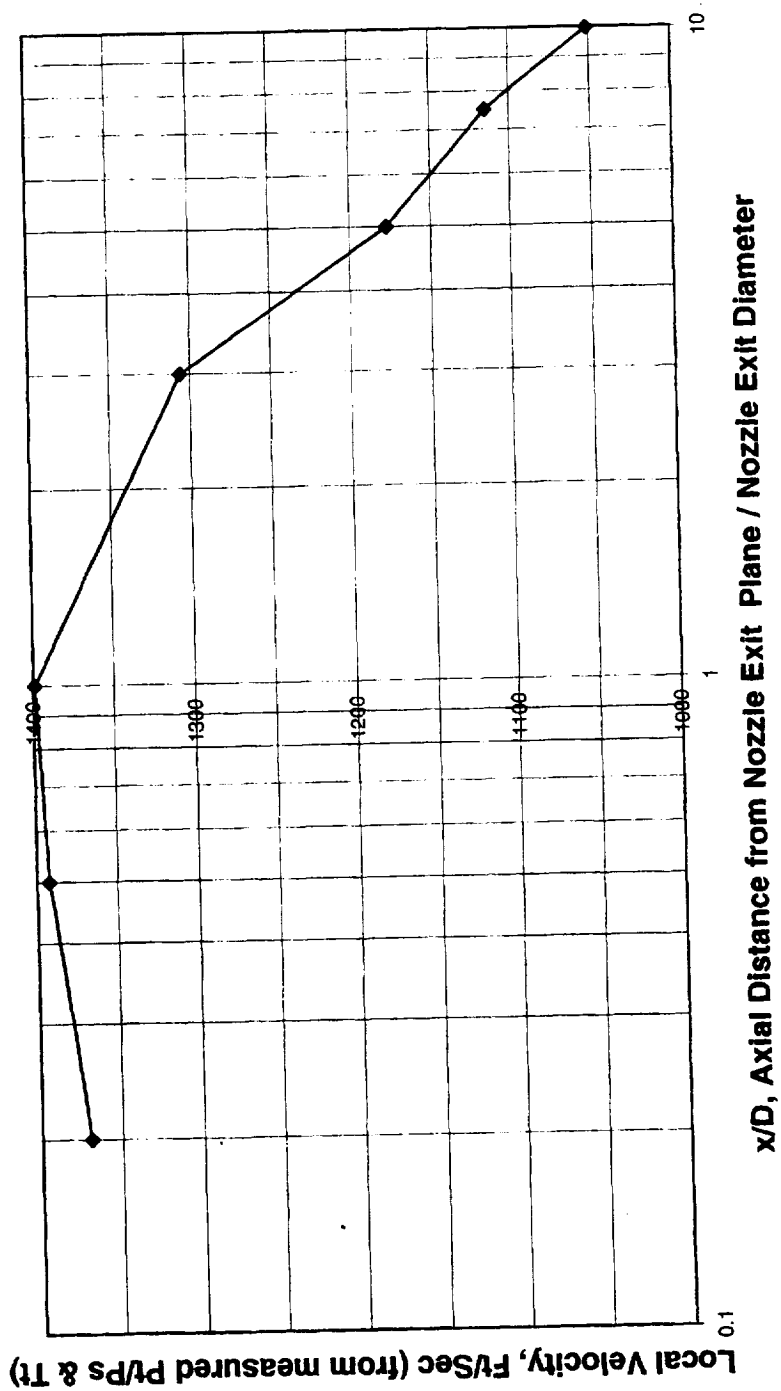


Figure 9. Vertical chordwise velocity profiles for 20DH mixer with 100% nozzle length at $X/D=0.2$ for TO #1, $M(fj) = 0.2$.

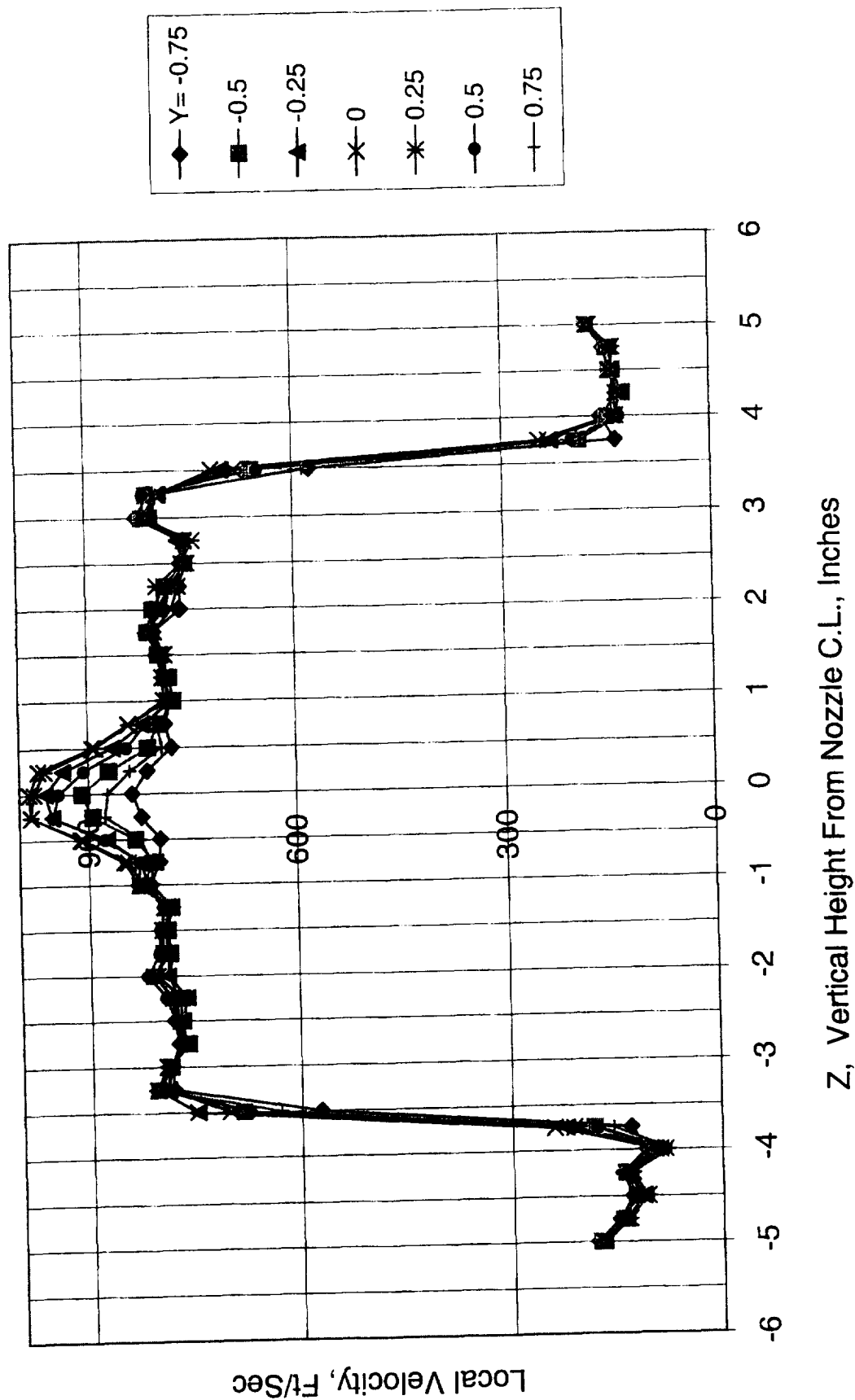


FIGURE 10

20L Deep Mixer Velocity Survey at $x/D=0.2$, NPR)core=1.39, NPR)fan=1.44,
 $Tt)core/Tt)fan=2.34$, Mn)FS= 0.2, 1996 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # V550

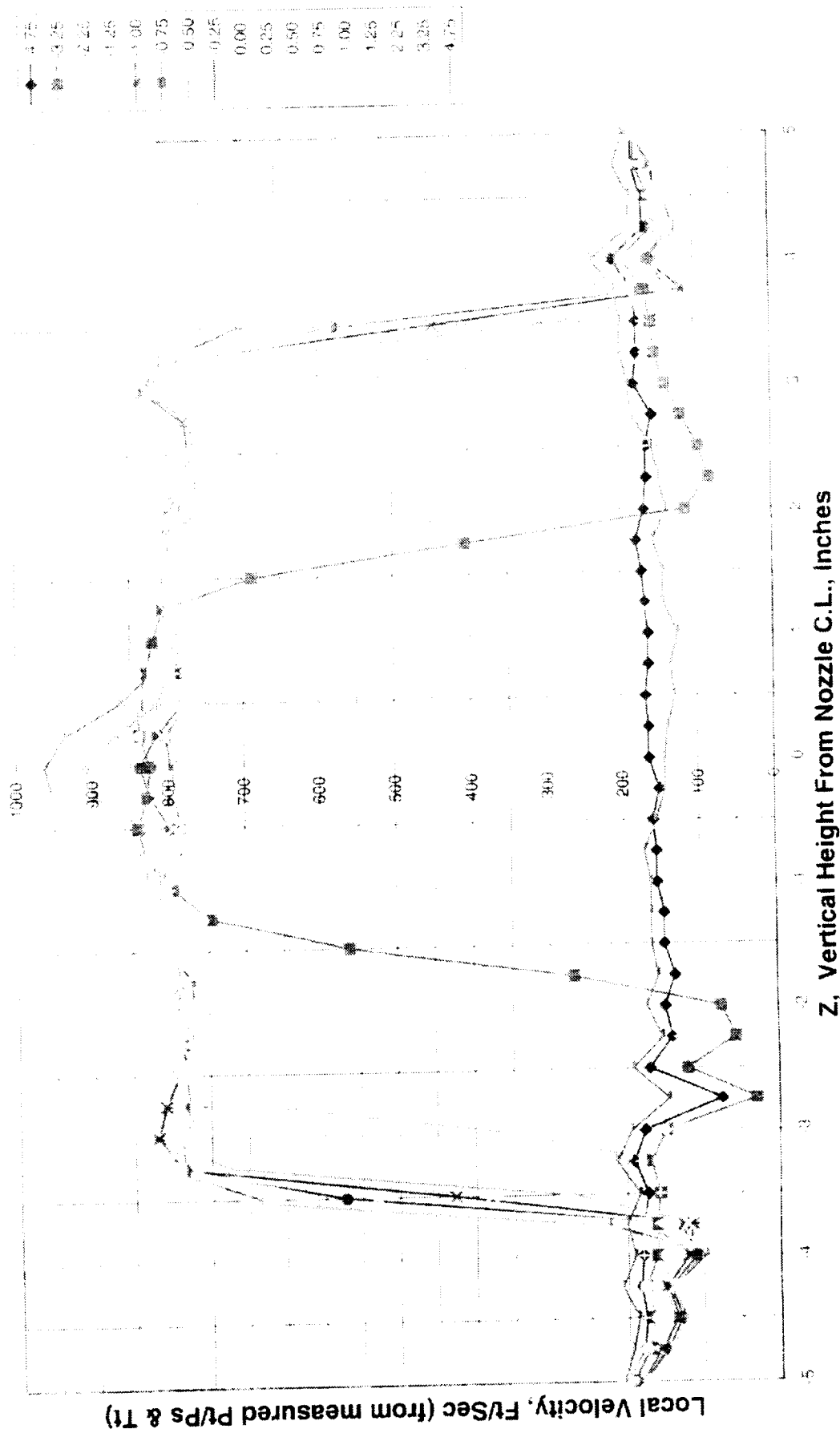


Fig 11(a). 20DH Mixer, 100%L, Velocity Contours at $x/D = 0.2$ at TO #2, $M(fj) = 0.2$

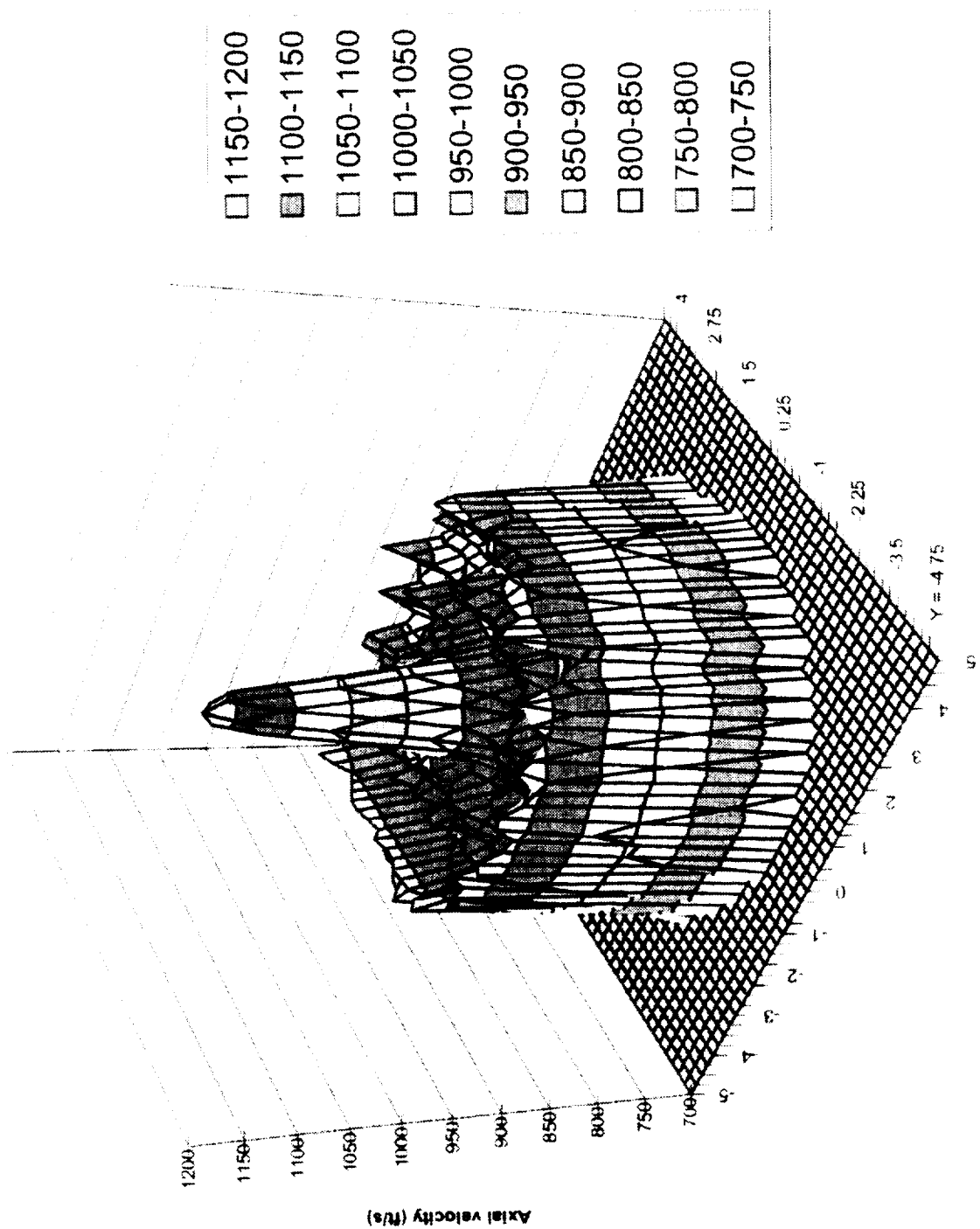


FIGURE 11(b)

20L Deep Mixer, 100% Nozzle Length, Velocity Survey at $x/D=0.2$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V560

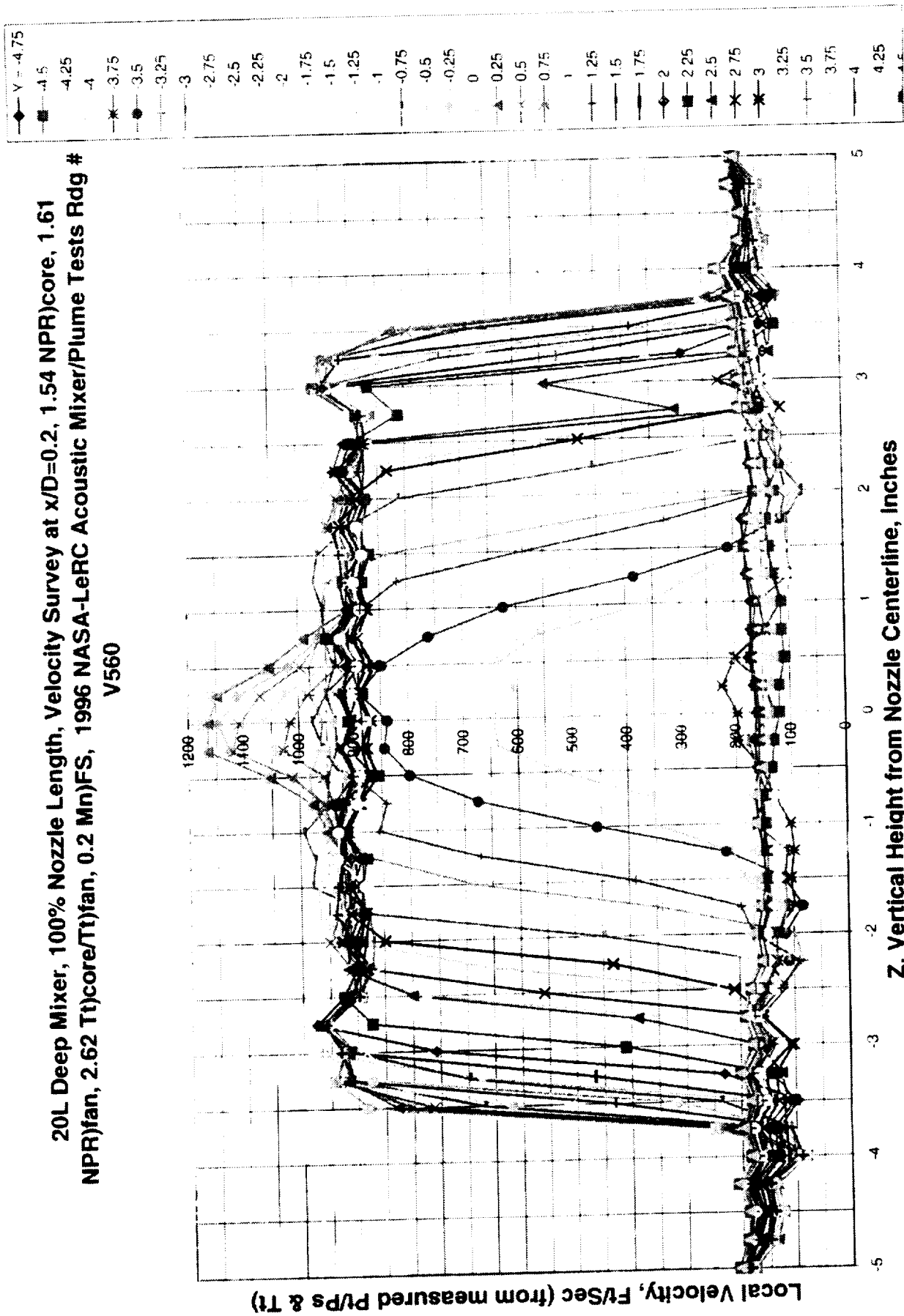


FIGURE 12

12L Baseline w/Cutouts - Velocity Distribution Across Plume at $x/D = 0.2$, NPR)core=1.39,
NPR)fan=1.44, Tt)core/Tt)fan=2.34, 0.2 Mn)FS - 1996 NASA-LeRC Acoustic/Plume Mixer Tests -
Rdg # V562

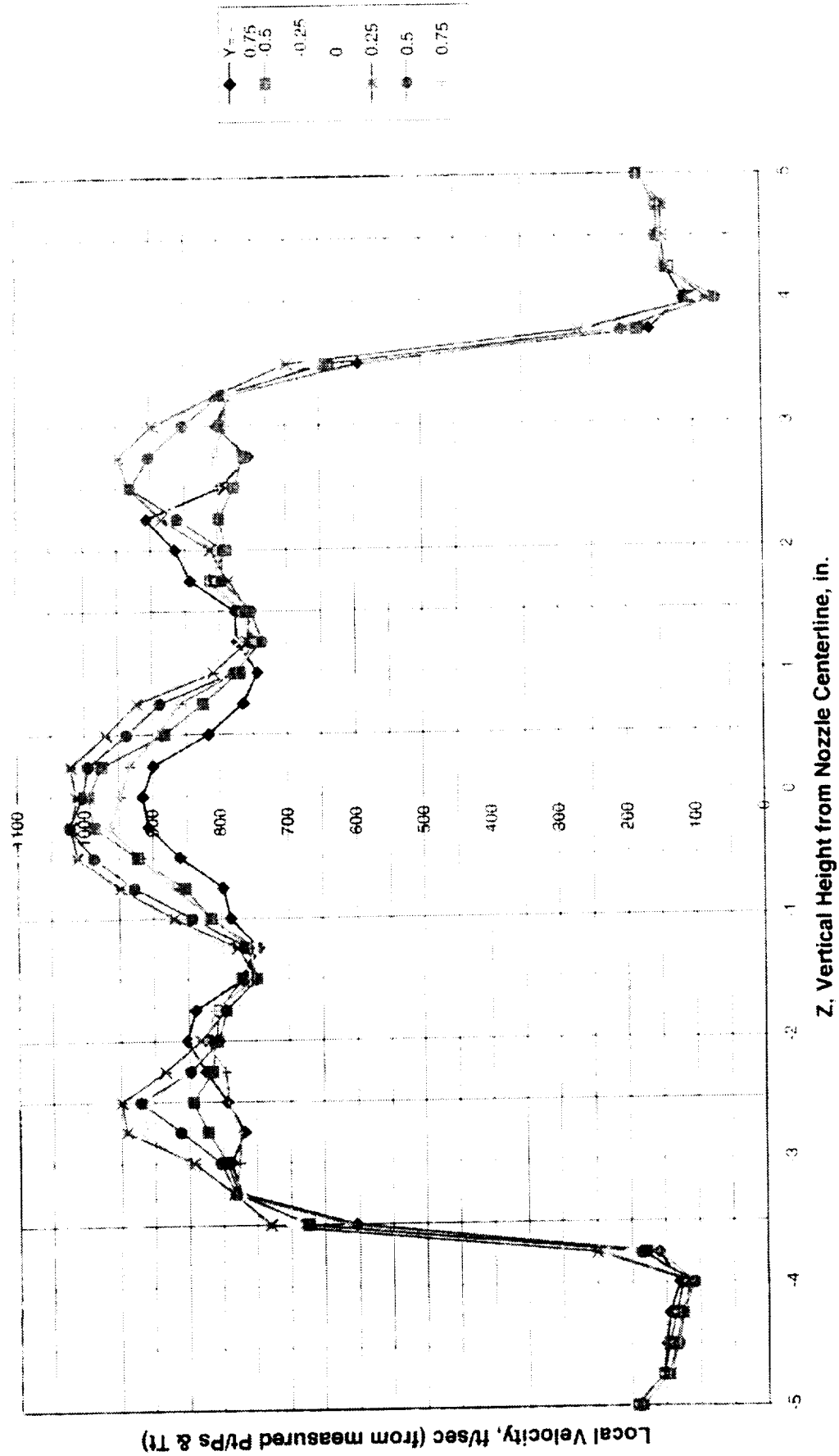


FIGURE 13

12 Lobe w/cutouts, 50% Nozzle Length - Velocity Distribution Across Plume at $x/D=0.2$,
 NPR)core=1.39, NPR)fan=1.44, Tt)core=2.37, 0.2 Mn)FS - 1996 NASA LeRC Acoustic
 Mixer/plume Tests - Rdg# V583

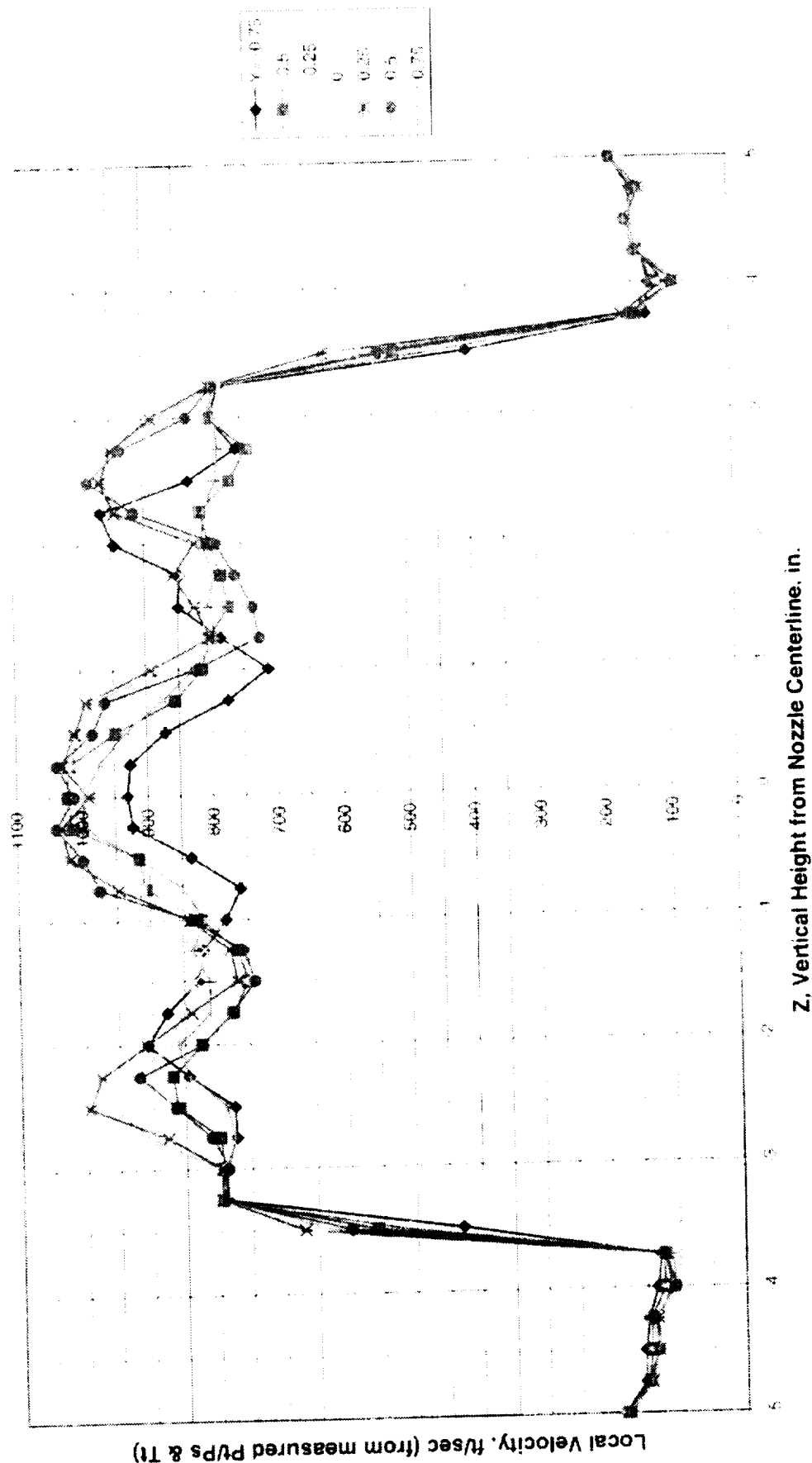


Figure 14(a). 12L Baseline Mixer (12CL) w/50% Nozzle Length Velocity Survey at $x/D=0.2$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg# V596

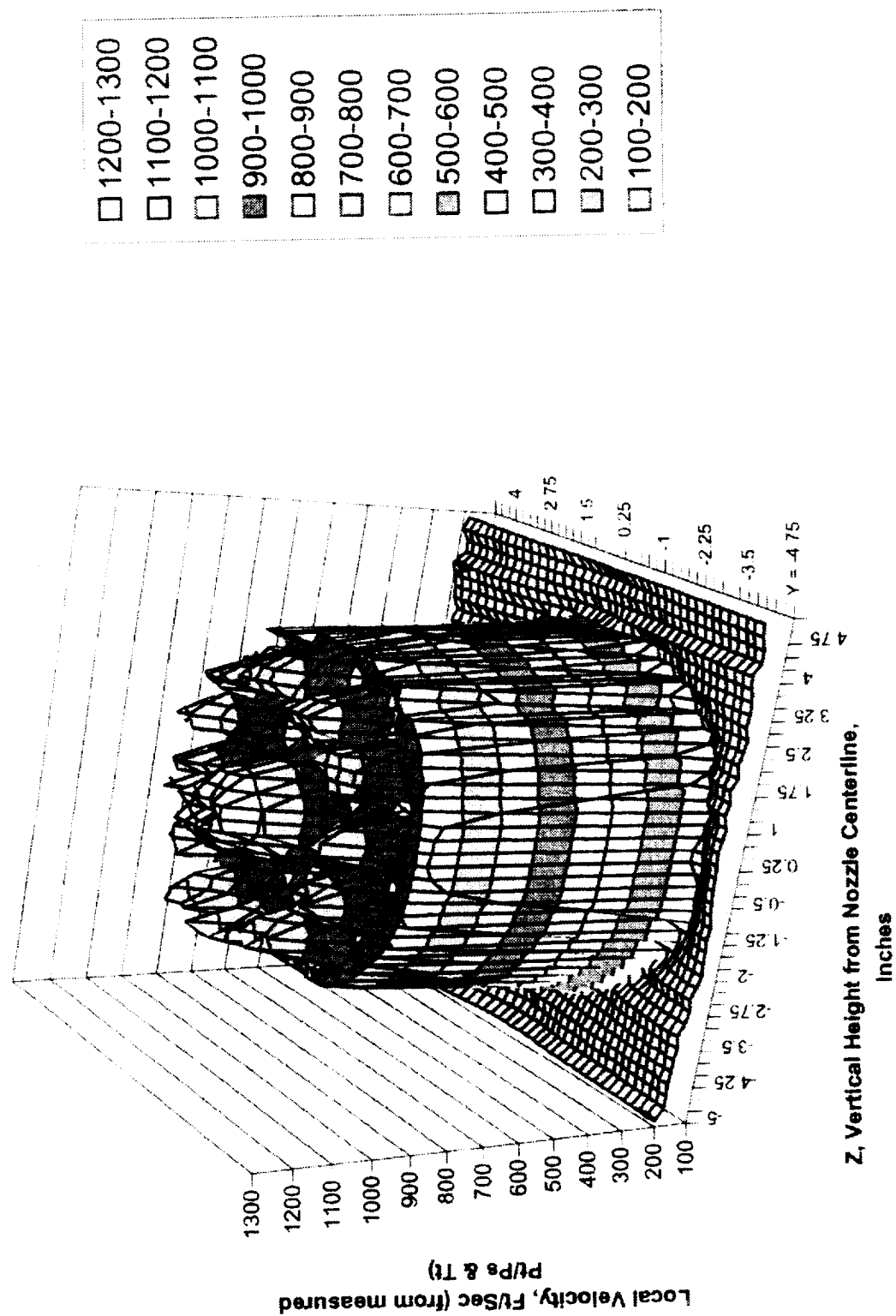


FIGURE 14(b)

12L Baseline Mixer w/50% Nozzle Length Velocity Survey at $x/D=0.2, 1.54$ NPR)core, 1.61 NPR)fan, 2.62 Tt)core(Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg# V596

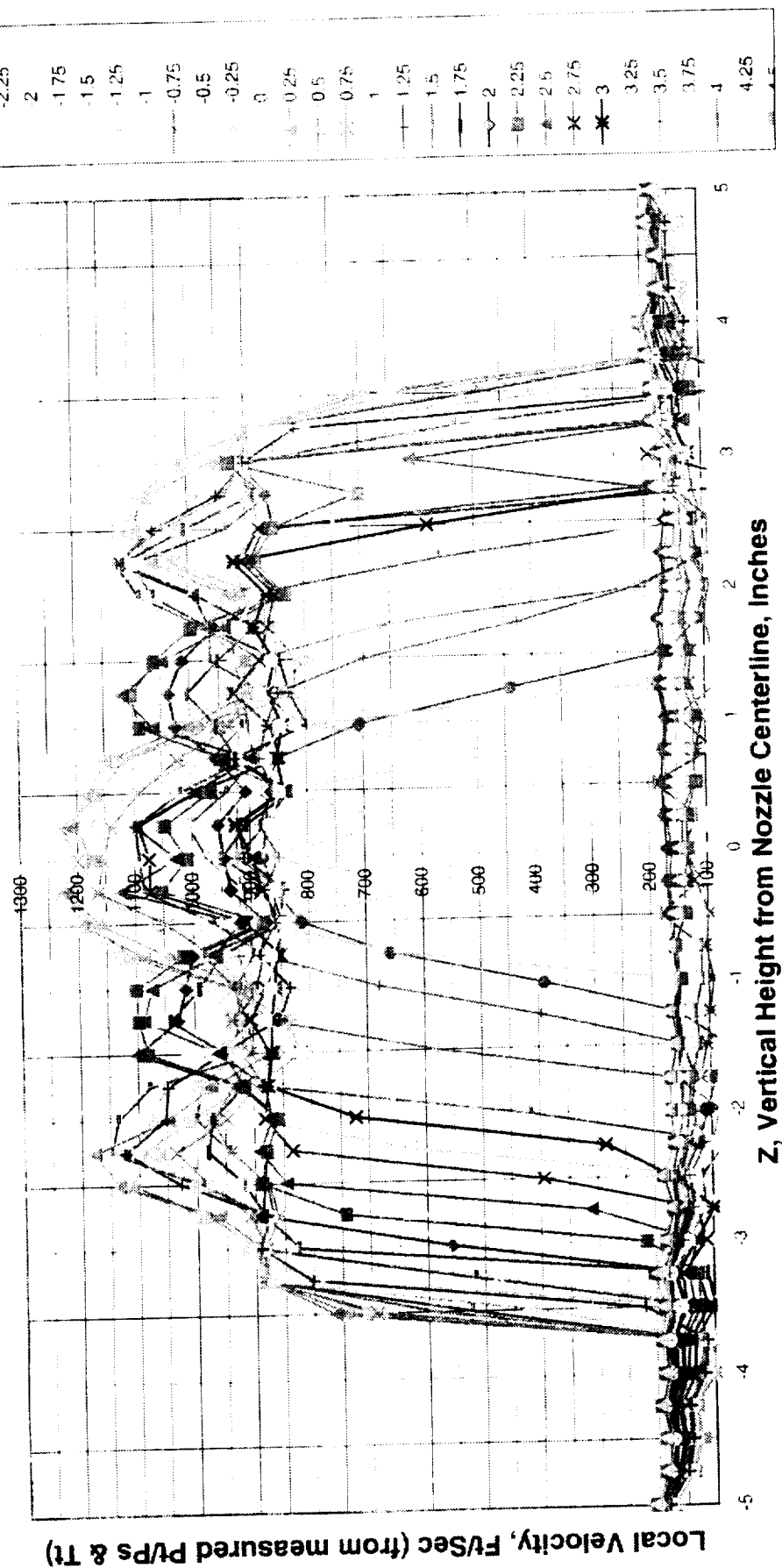


Figure 15(a). 12L Baseline with Cutouts (12CL), 100% Nozzle Length, Velocity Survey @ $x/D=0.2$,
 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic
 Mixer/Plume Tests Rdg # V575

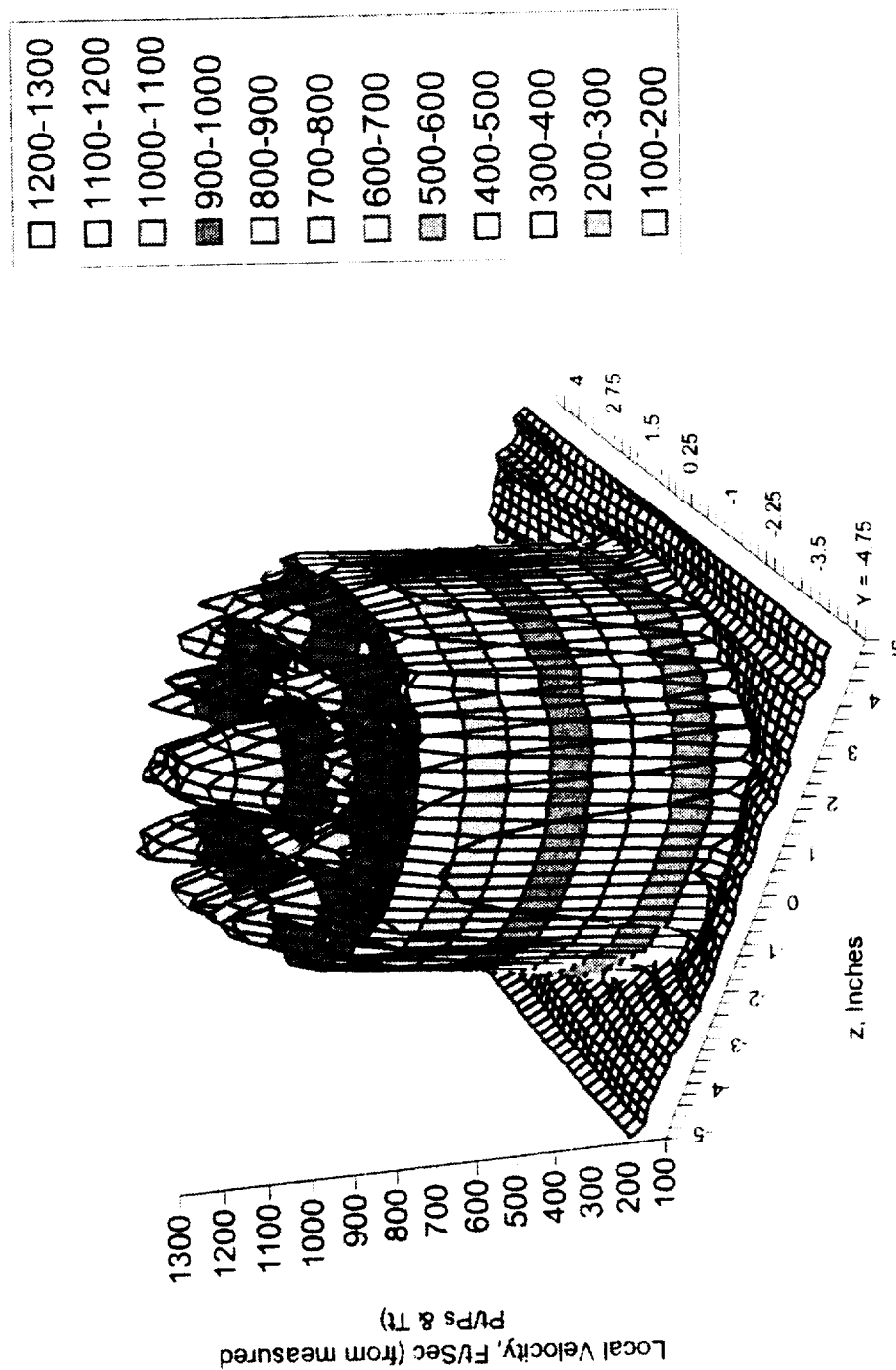


FIGURE 15(b)

12L Baseline with Cutouts, 100% Nozzle Length, Velocity Survey @ $x/D=0.2$, 1.54 NPR)core,
 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests
 Rdg # V575

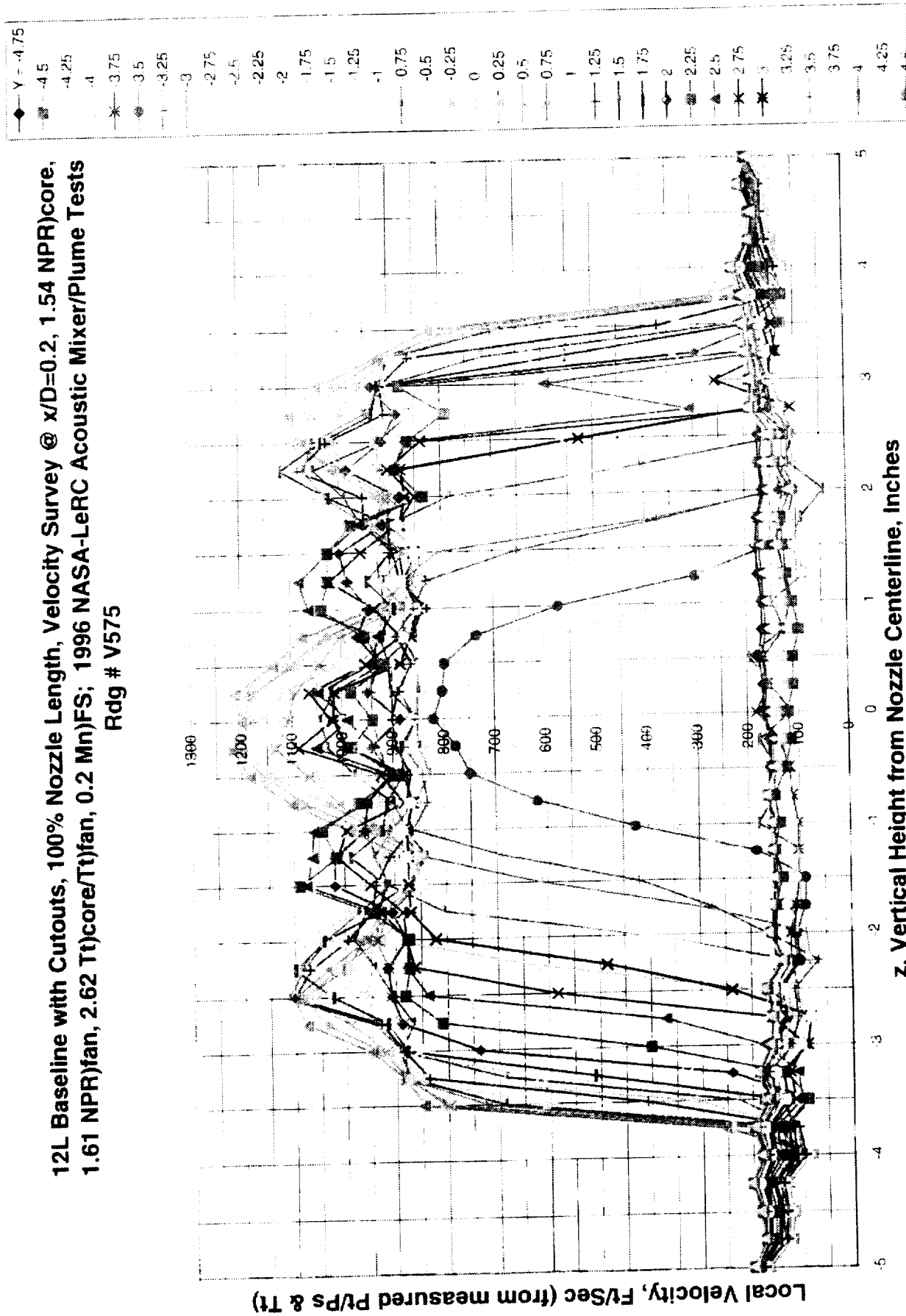


Figure 16(a). Velocity profiles for 12CL mixer with 50% nozzle length at $X/D = 0.2$ for TO #3 at $M(fj) = 0.2$.

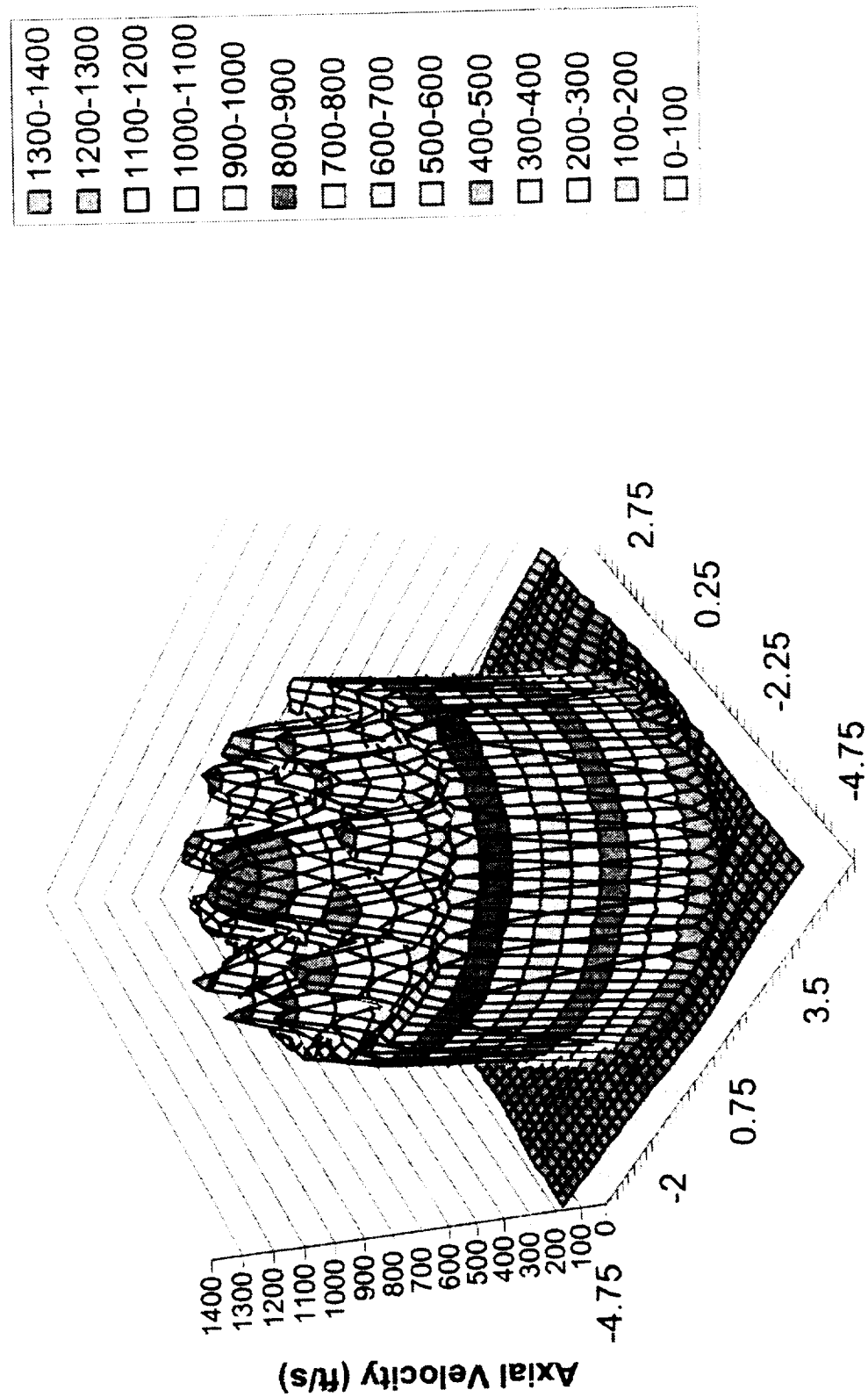


FIGURE 16(L)

12L Baseline Mixer w/50% Nozzle Length Velocity Survey at $x/D=0.2$ (with some Y values removed for clarity); 1.82 NPR)fan, 0.2 Mn)FS, 2.79 Tt)core/Tt)fan, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg #V597

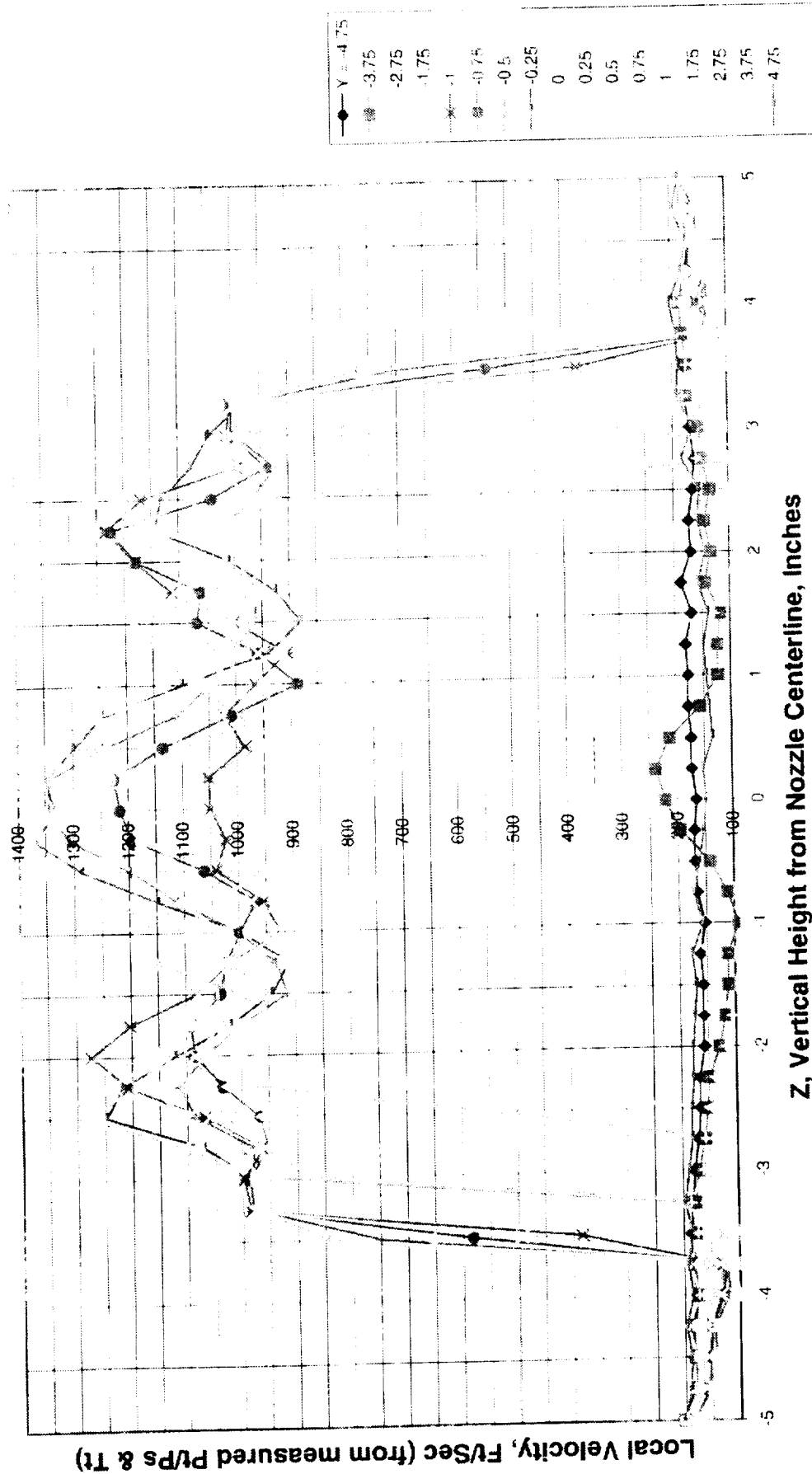


Figure 17 (a). 12L Baseline Mixer (12CL) w/100% Nozzle Length. Velocity Survey at $x/D=0.2, 1.74$
 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS. 1996 NASA-LeRC Acoustic Mixer/Plume
 Tests Rdg # V576

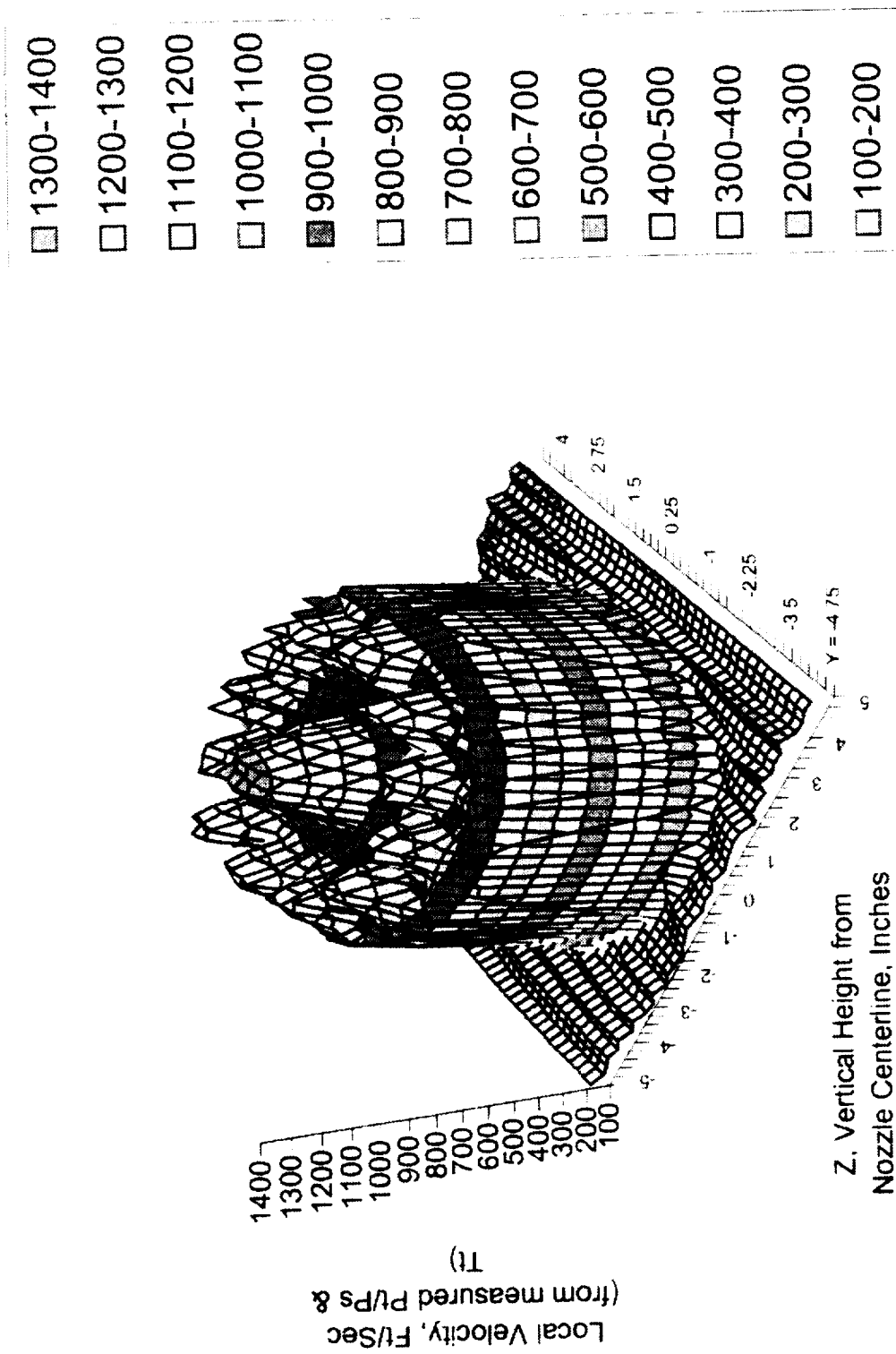


FIGURE 17(b)

12L Baseline Mixer w/100% Nozzle Length, Velocity Survey at $x/D=0.2$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core(Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V576

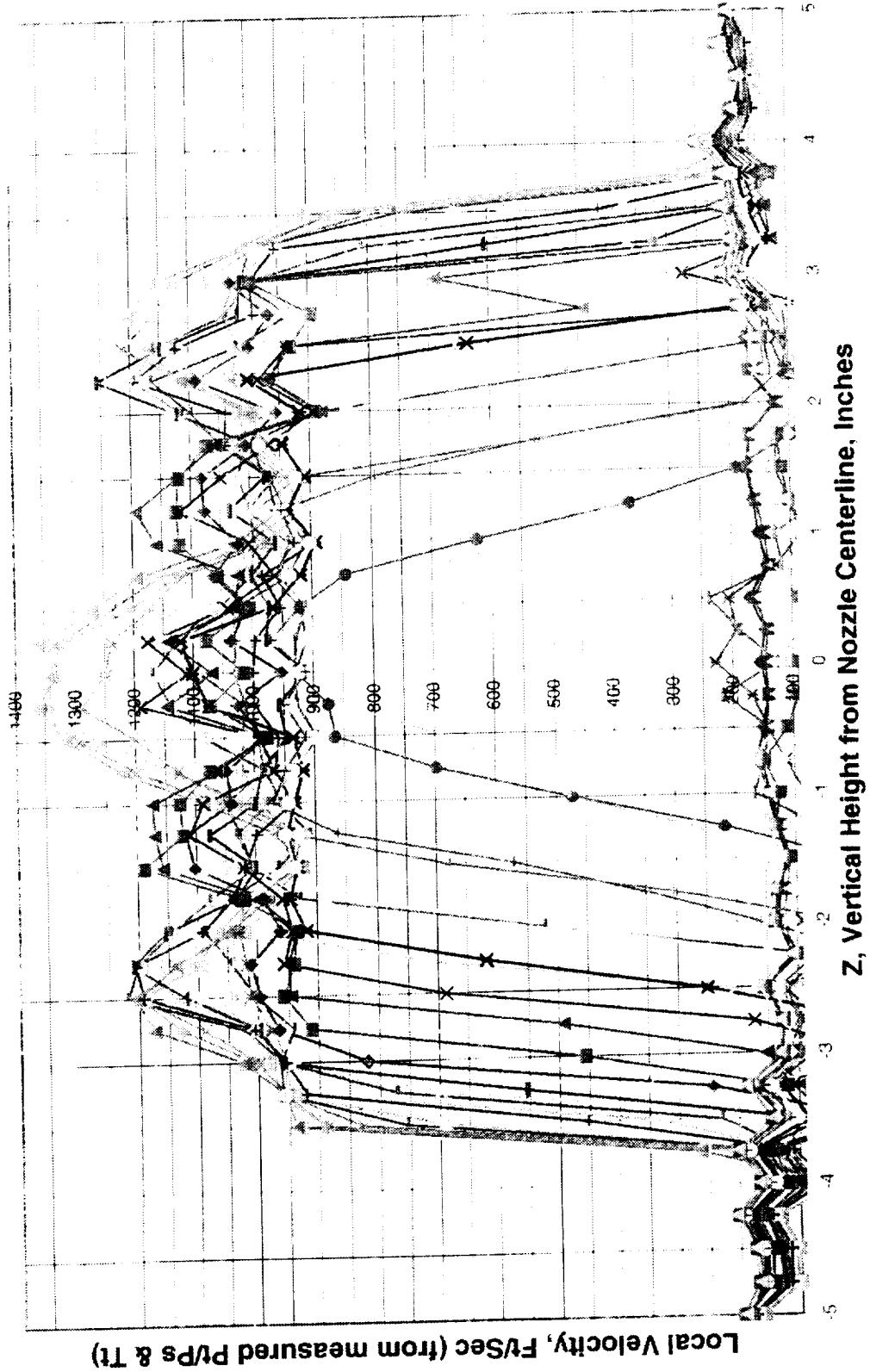


FIGURE 18

12P Internal Tongue - Velocity Distribution Across Plume at $x/D=0.2$, NPR)core=1.39,
NPR)fan=1.44, Tt)core/Tt)fan=2.34, 0.2 Mn)FS - 1996 NASA-LeRC Acoustic Mixer/Plume Tests,
Rdg# V512

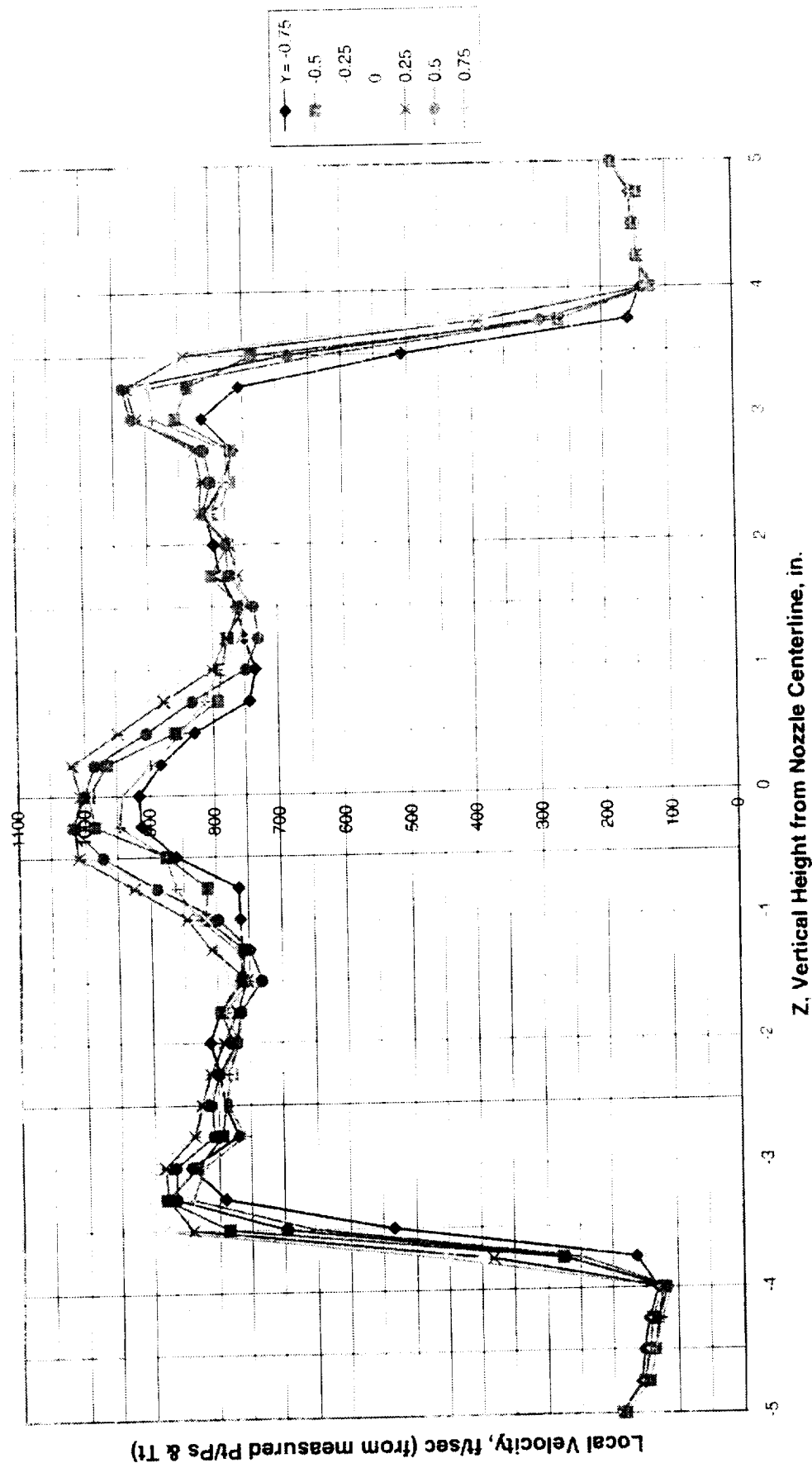


FIGURE 19

20L Deep Mixer - Velocity Distribution Across Plume at $x/D=1.0$, NPR)core=1.39,
NPR)fan=1.44, Tt)core(Tt)fan=2.34, 0.2 Mn)FS - 1996 NASA-LeRC Acoustic Mixers/Plume Test
Rdg# V552

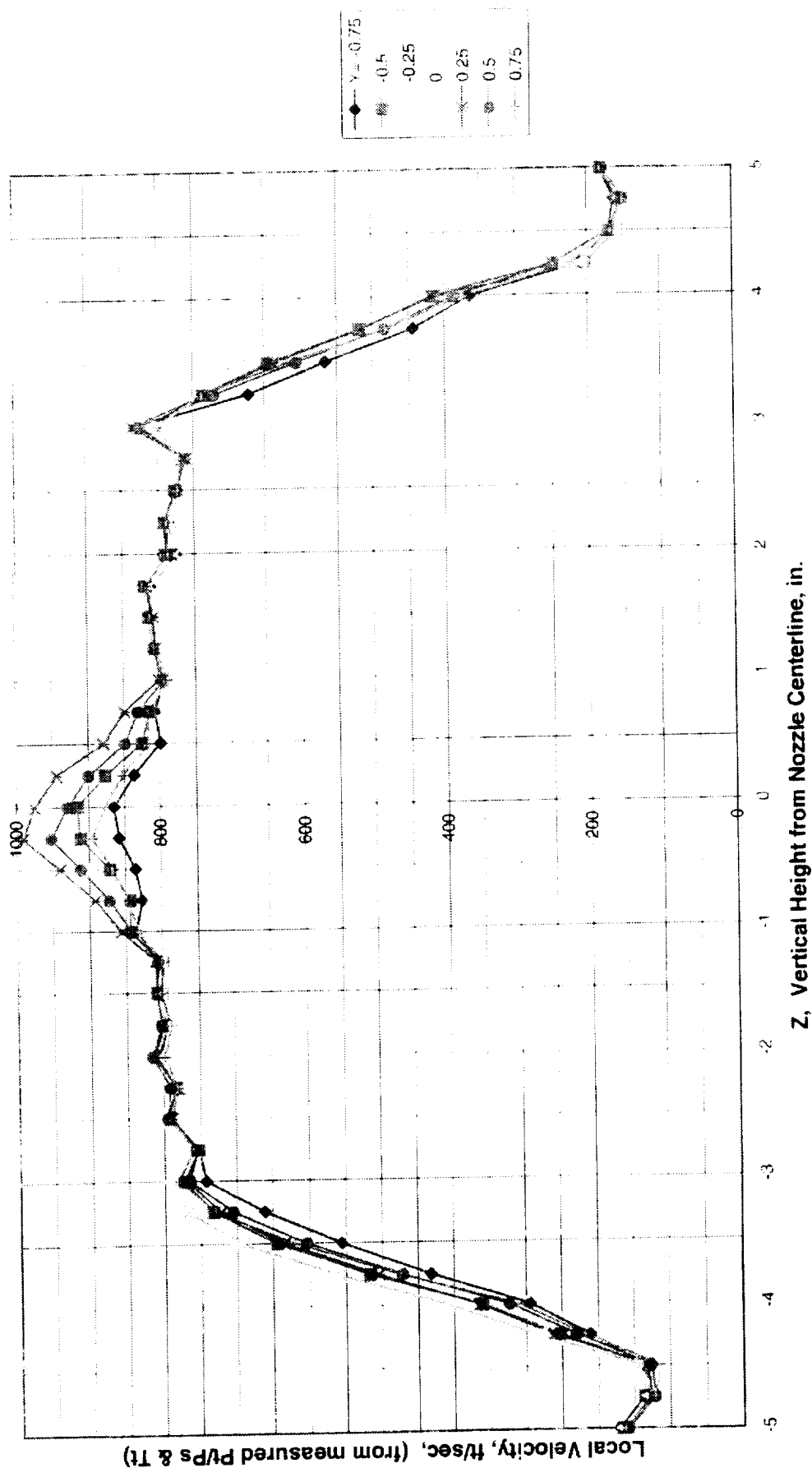


FIGURE 20

12 Lobe Baseline w/Cutouts - Velocity Distribution Across Plume at $x/D=1.0$, NPR)core=1.39,
NPR)fan=1.44, Tt)core/Tt)fan=2.35, 0.2 Mn)FS - 1996 NASA-LeRC Acoustic/Plume Mixer Tests,
Rdrg # V563

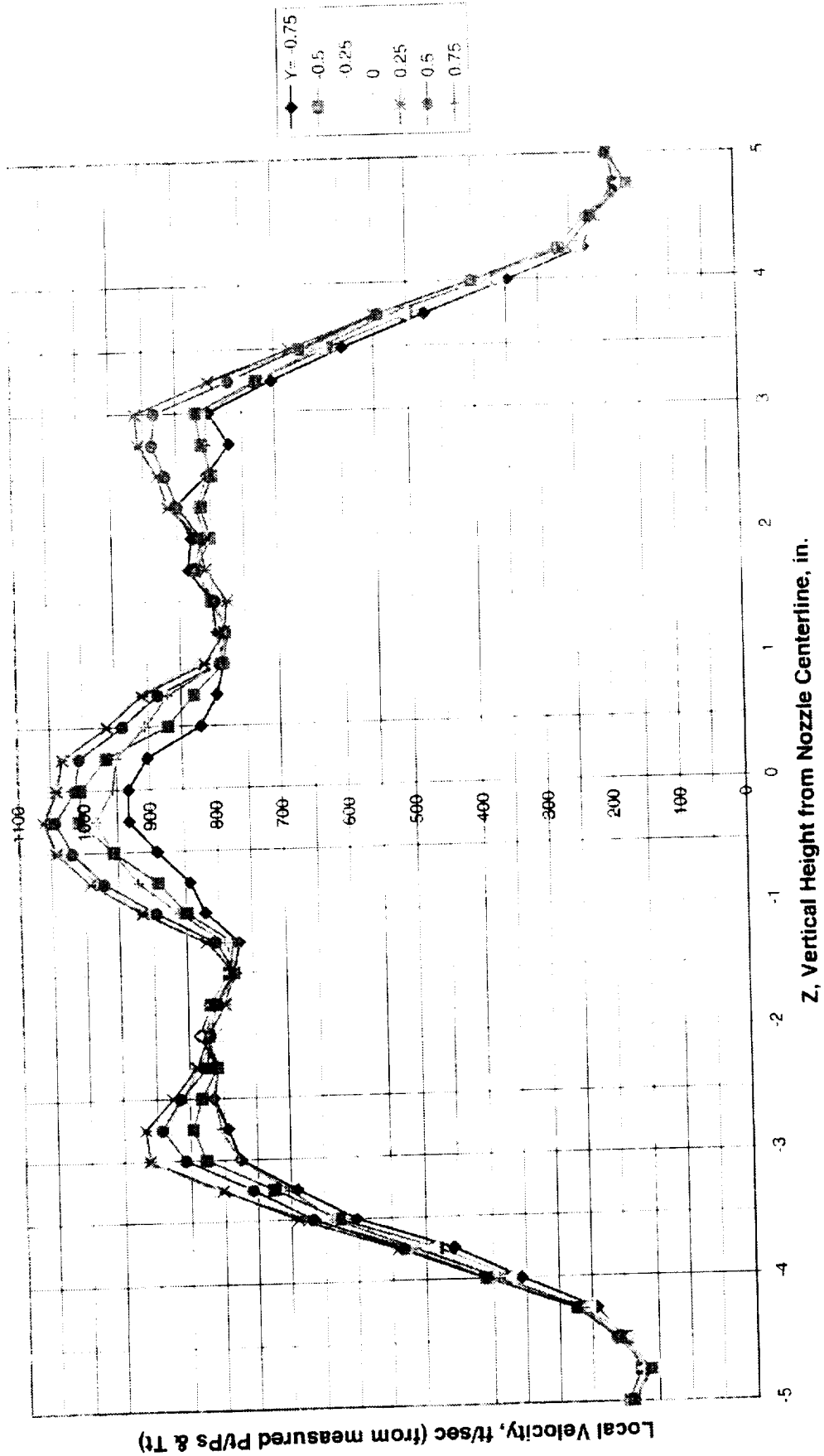


Figure 21(a). Velocity Profiles at $x/D=1.0$, 20L Deep Scalloped Mixer (20DH) w/100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan 2.79 Tt)core/Tt)fan, Rdg# V541 - 1996 NASA-LeRC Acoustic Mixer/Plume Test Rdg# V541

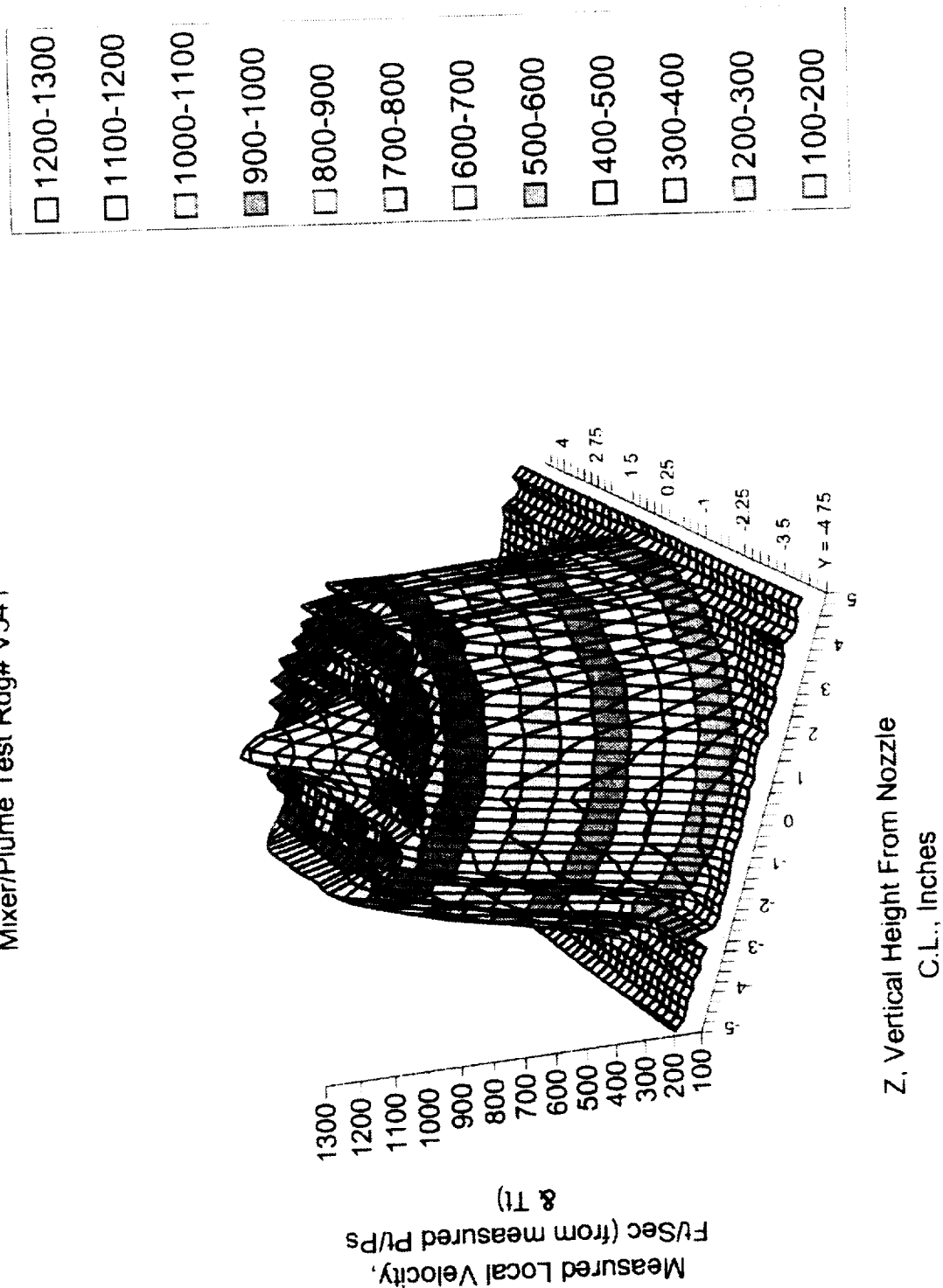


FIGURE 21(b)

Velocity Profile at $x/D=1.0$, 20L Deep Scalloped Mixer w/100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan 2.79 Tt)core/Tt)fan, Rdg# V541 - 1996 NASA-LeRC Acoustic Mixer/Plume Test Rdg# V541

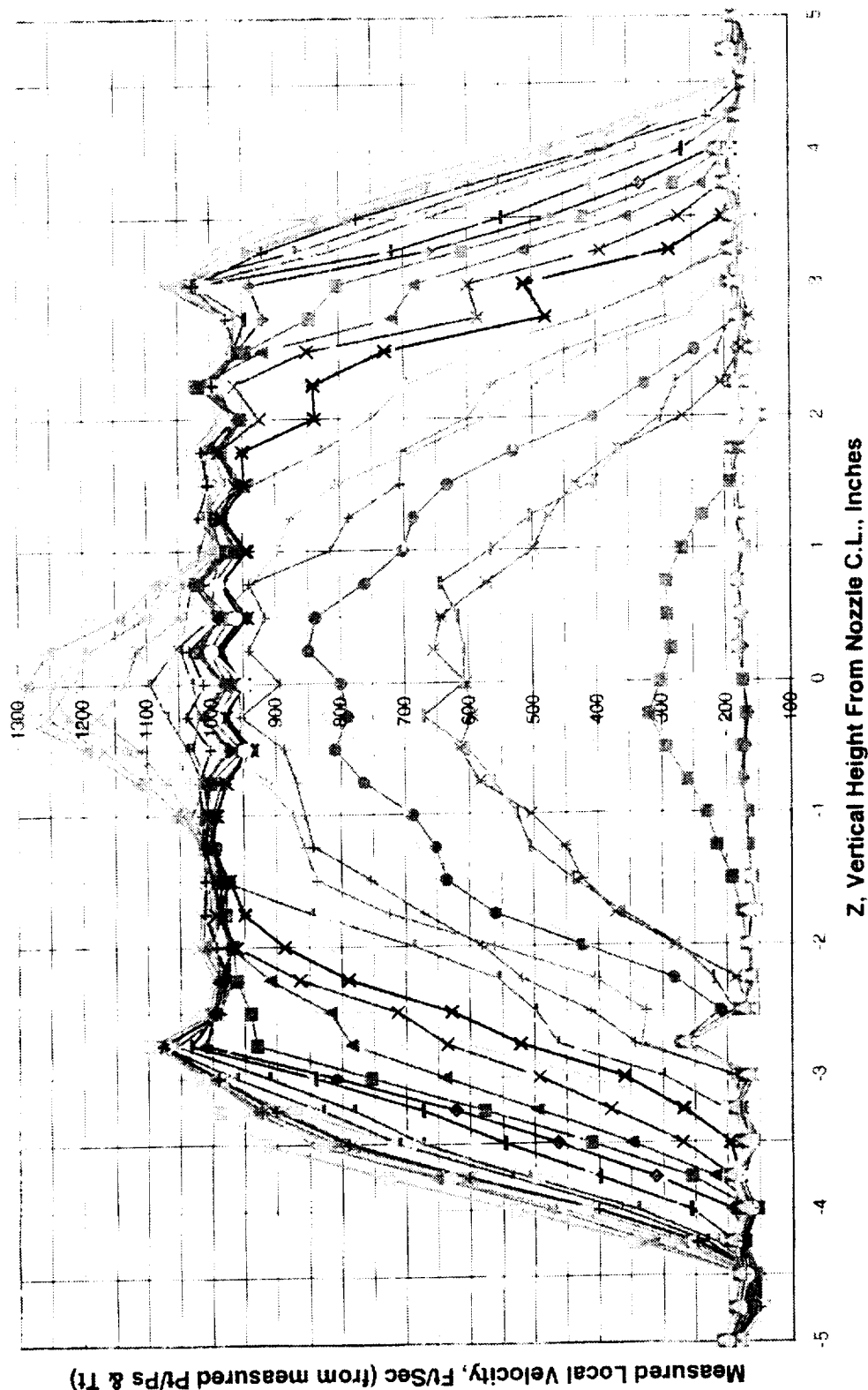


FIGURE 22

12L Baseline Mixer w/50% Nozzle Length Velocity Survey at $x/D=1.0$, 1.74 NPR)core, 1.82 NPR)fan, 0.2 Mn)FS, 2.79 Tt)core(Tt)fan, 1966 NASA-LeRC Acoustic Mixer/Plume Tests Rdg# V599

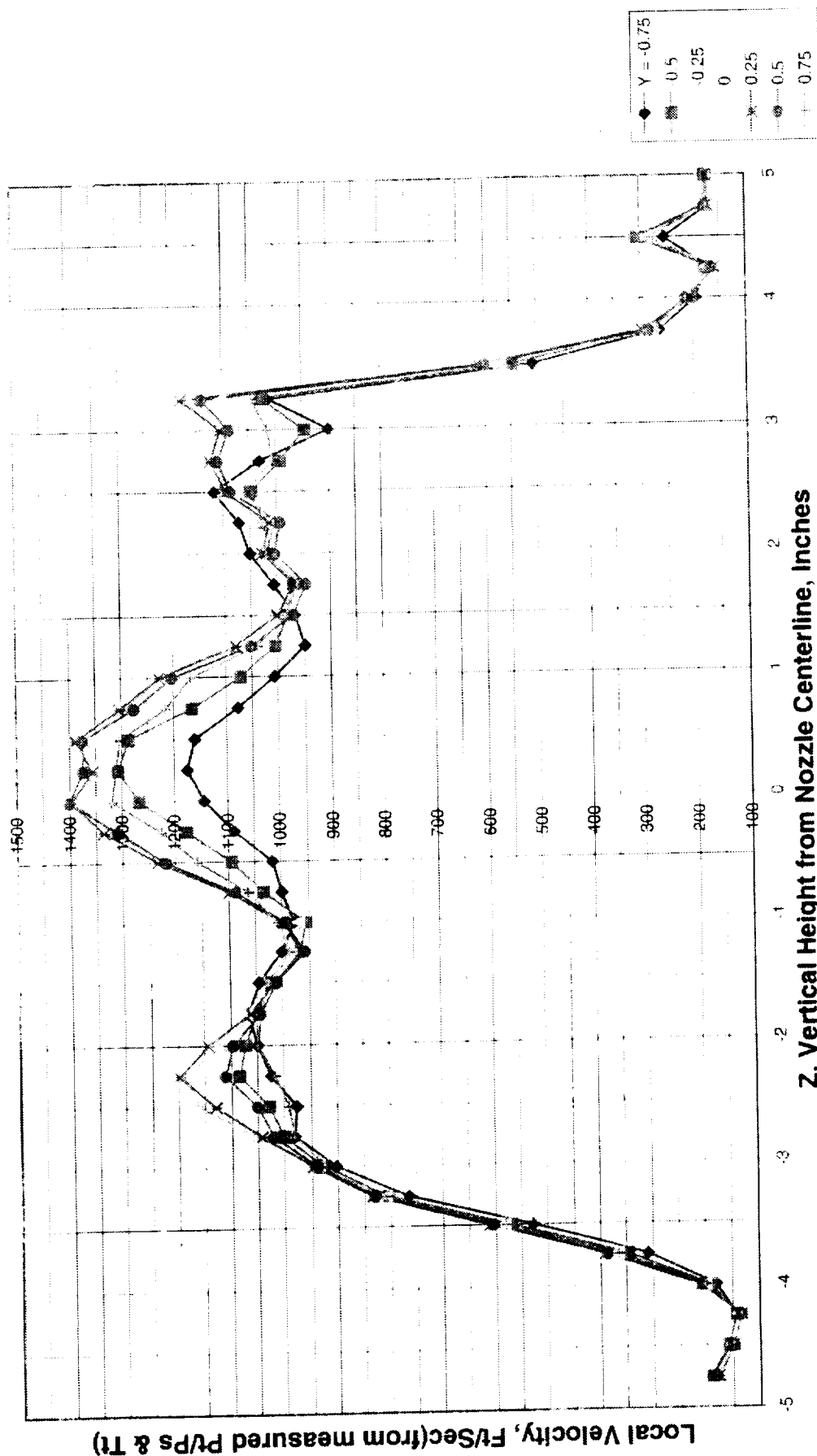


Figure 23(a). 12L Baseline Mixer (12CL) w/100% Nozzle Length, Velocity Survey at $x/D=1.0$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Ti)core(Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V577

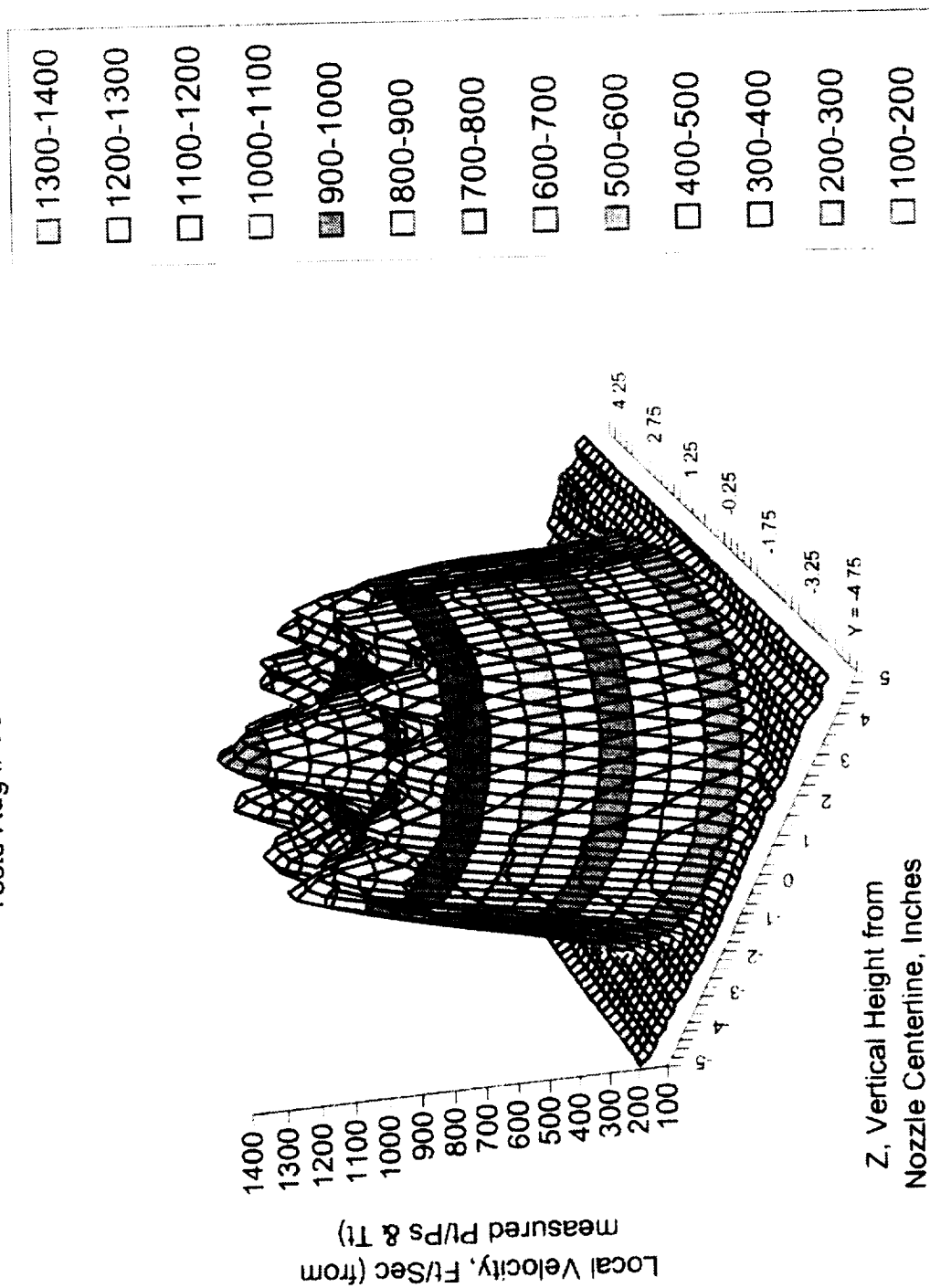


FIGURE 23 (b)

12L Baseline Mixer w/100% Nozzle Length, Velocity Survey at $x/D=1.0$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core(Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V577

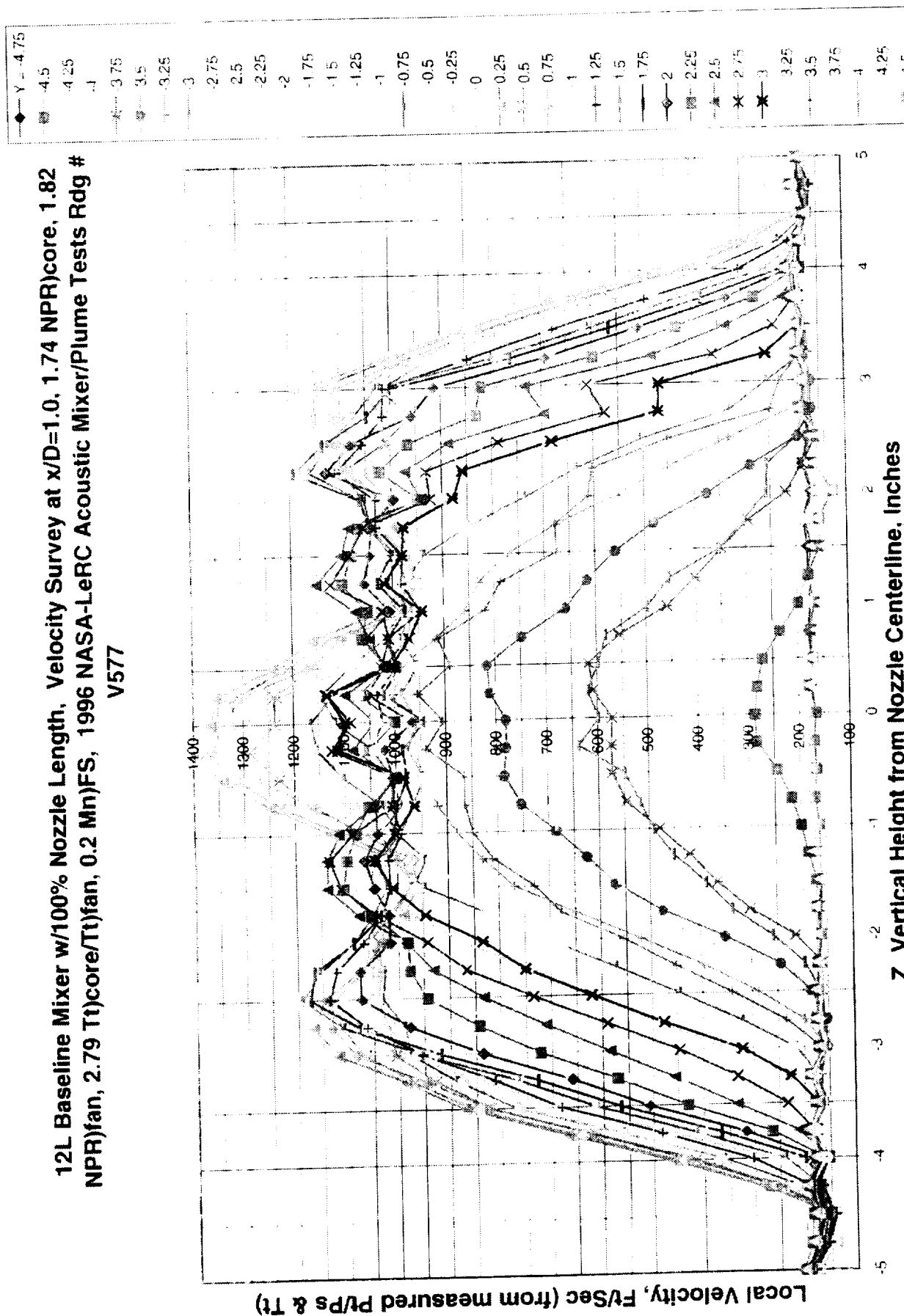


Figure 24(a). 12L Baseline Mixer with Cutouts (12CL), 100% Nozzle Length, Velocity Survey @ $x/D=1.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V574

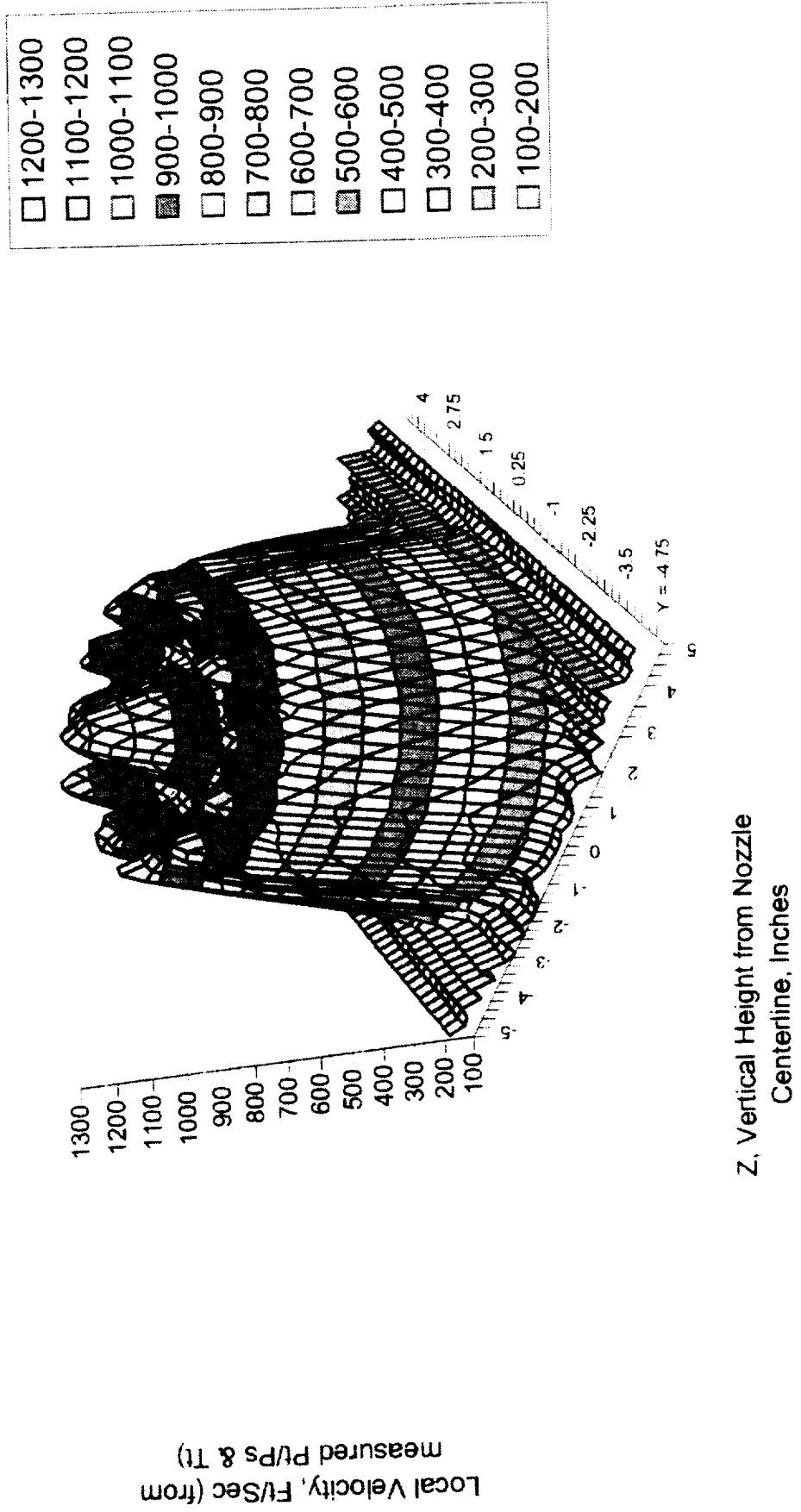


FIGURE 24 (b)

12L Baseline Mixer with Cutouts, 100% Nozzle Length, Velocity Survey @ $x/D=1.0, 1.54$
 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic
 Mixer/Plume Tests Rdg # V574

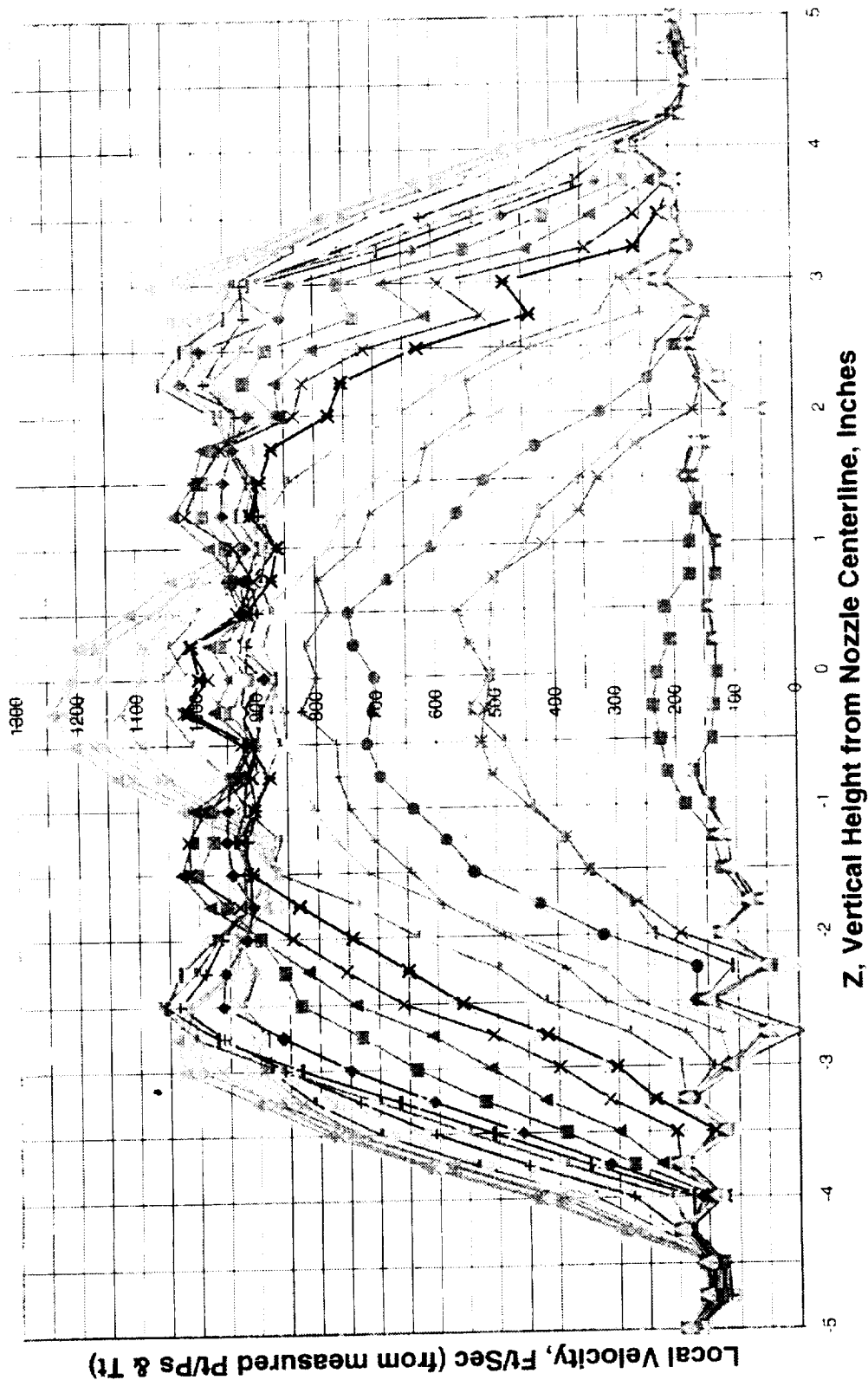


Figure 25(a). 20L Deep Mixer (20DH), 100% Nozzle Length, Velocity Survey at $x/D=1.0, 1.54$
 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic/Plume Tests
 Rdg# V561

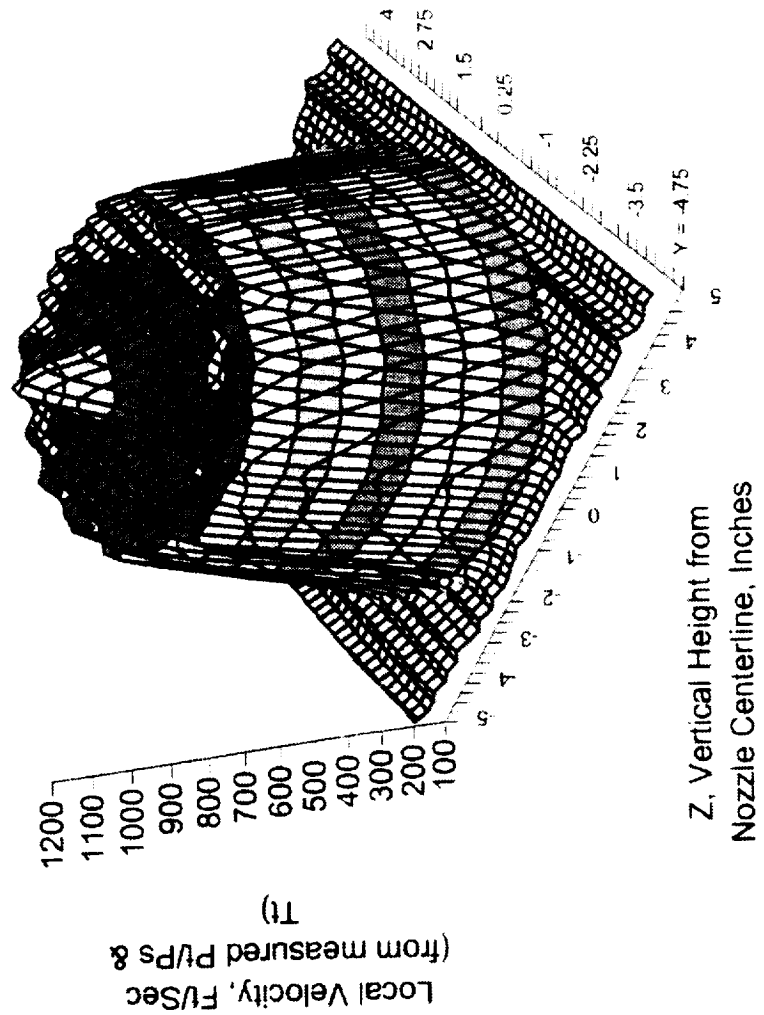
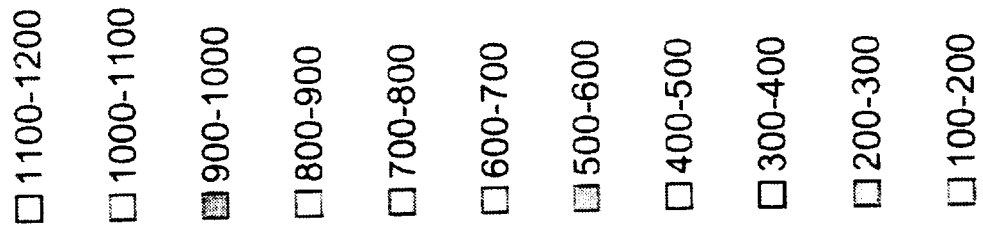


FIGURE 25 (b)

20L Deep Mixer, 100% Nozzle Length, Velocity Survey at $x/D=1.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core(Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic/Plume Tests Rdg# V561

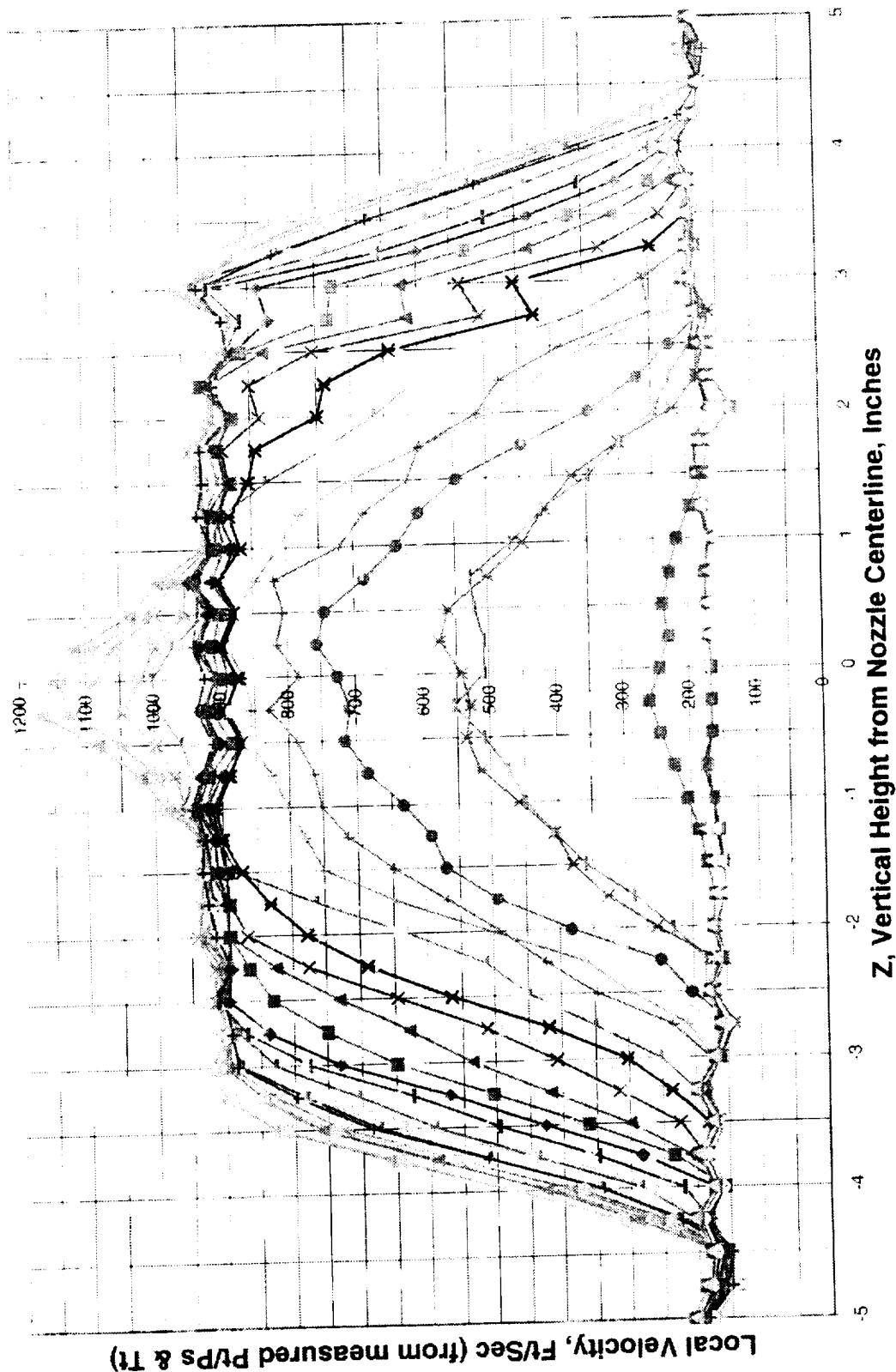


Figure 26(a). 20L Deep Mixer (20DH), 100% Nozzle Length, Velocity Survey at $x/D=0.2$, 1.54 NPR/core, 1.61 NPR(fan, 2.62 Tt)core/Tt(fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V560

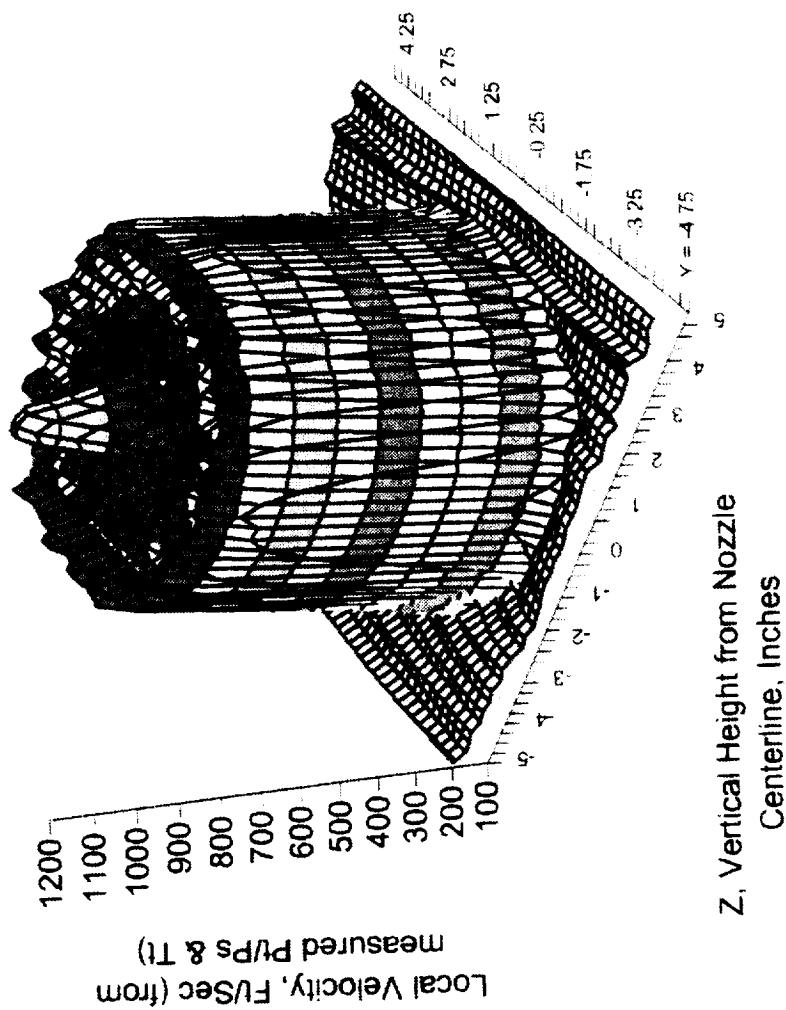
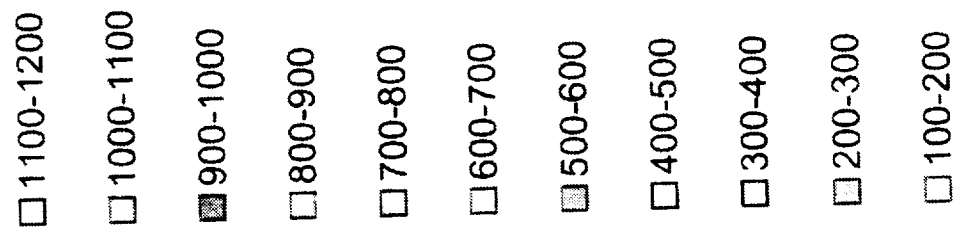


FIGURE 26 (b)

20L Deep Mixer, 100% Nozzle Length, Velocity Survey at $x/D=0.2$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V560

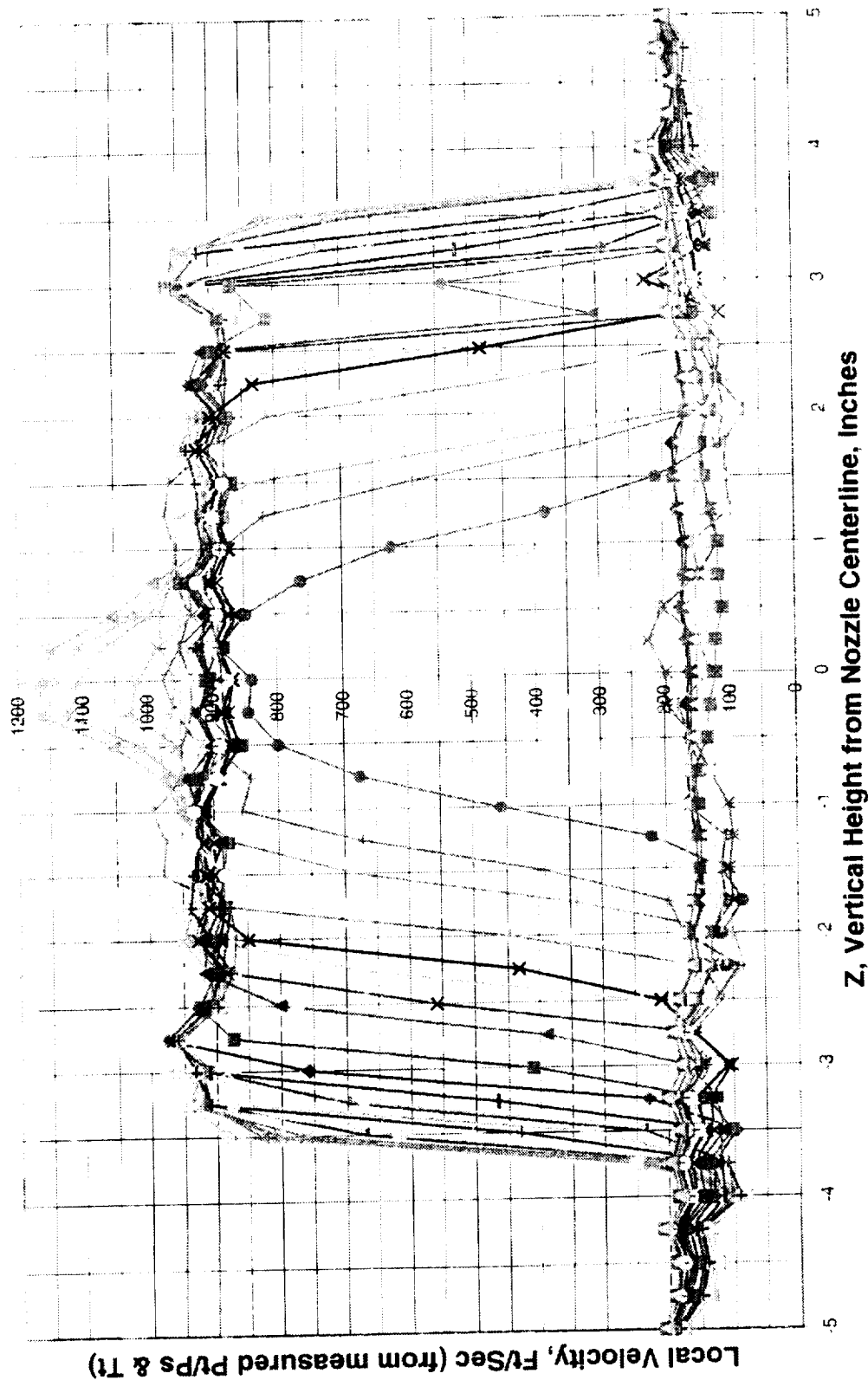


FIGURE 27

20L Deep Mixer, 100% Nozzle Length, Velocity Survey at $x/D=0.5$, 1.54 NPR)core, 1.61NPR)fan, 2.62 Tt)core(Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V559

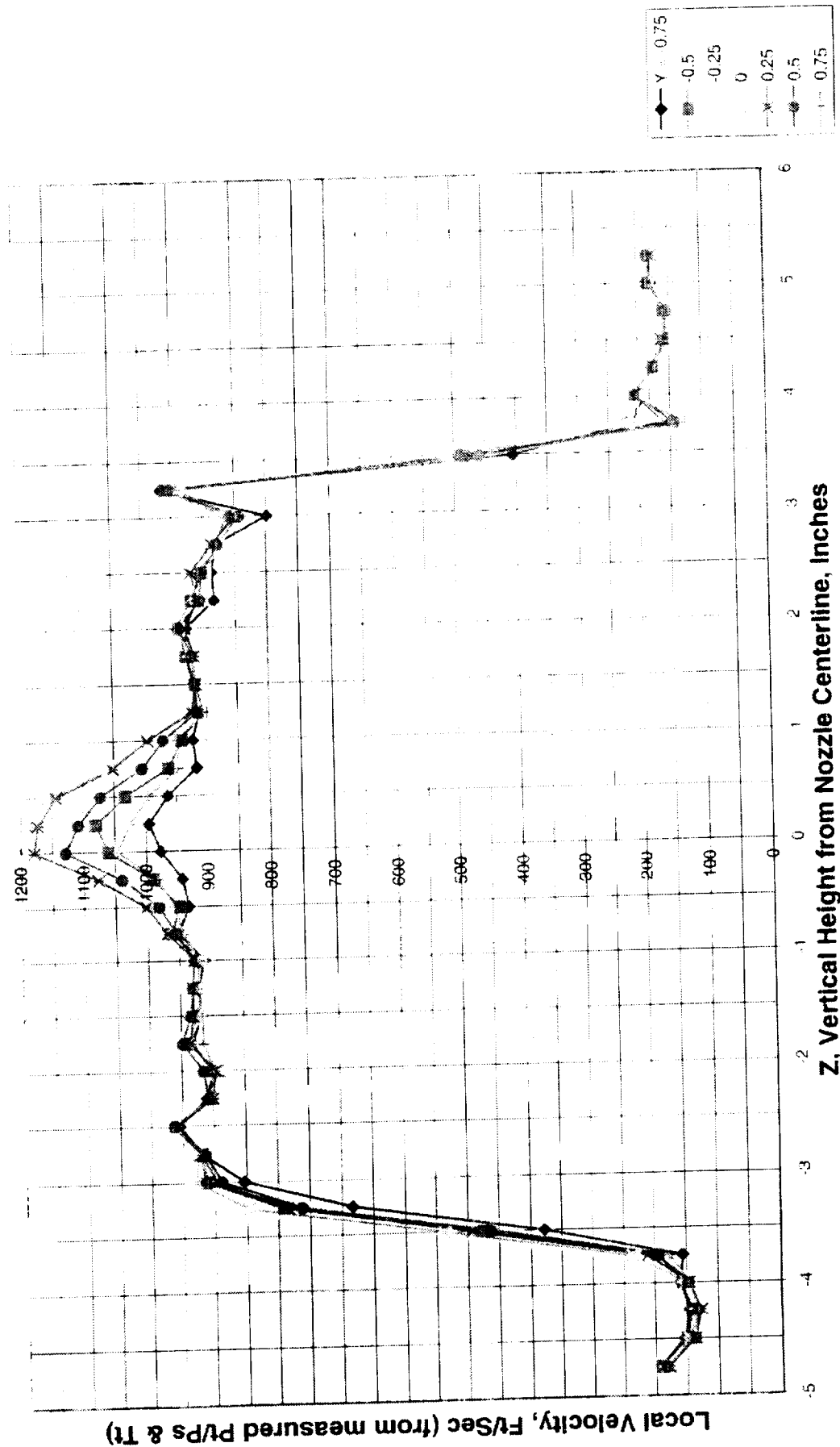


Figure 28(a). 20L Deep Mixer (20DH), 100% Nozzle Length, Velocity Survey at $x/D=1.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS. 1996 NASA-LeRC Acoustic/Plume Tests
Rdg# V561

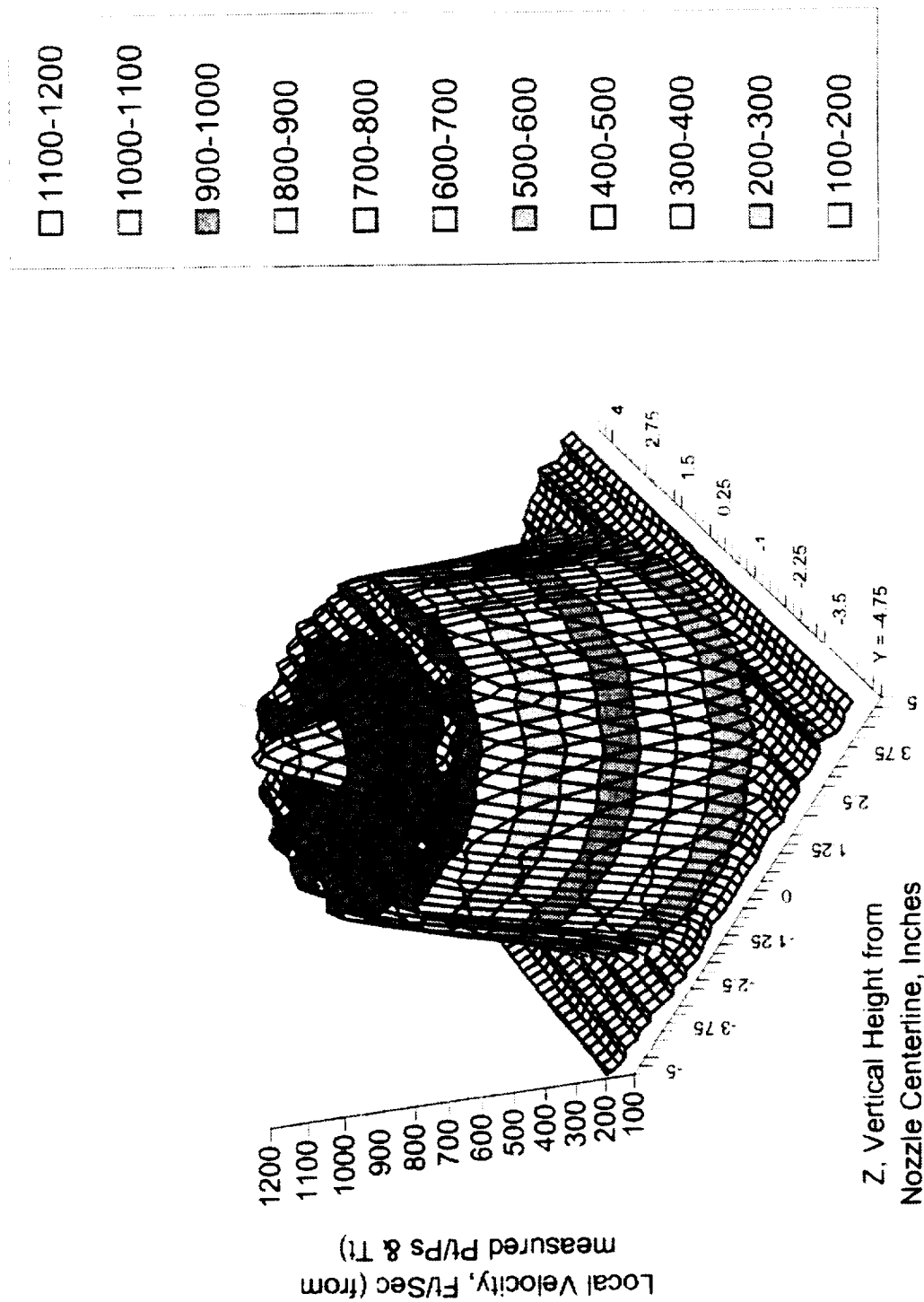


FIGURE 28 (b)

20L Deep Mixer, 100% Nozzle Length, Velocity Survey at $x/D=1.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic/Plume Tests Rdg# V

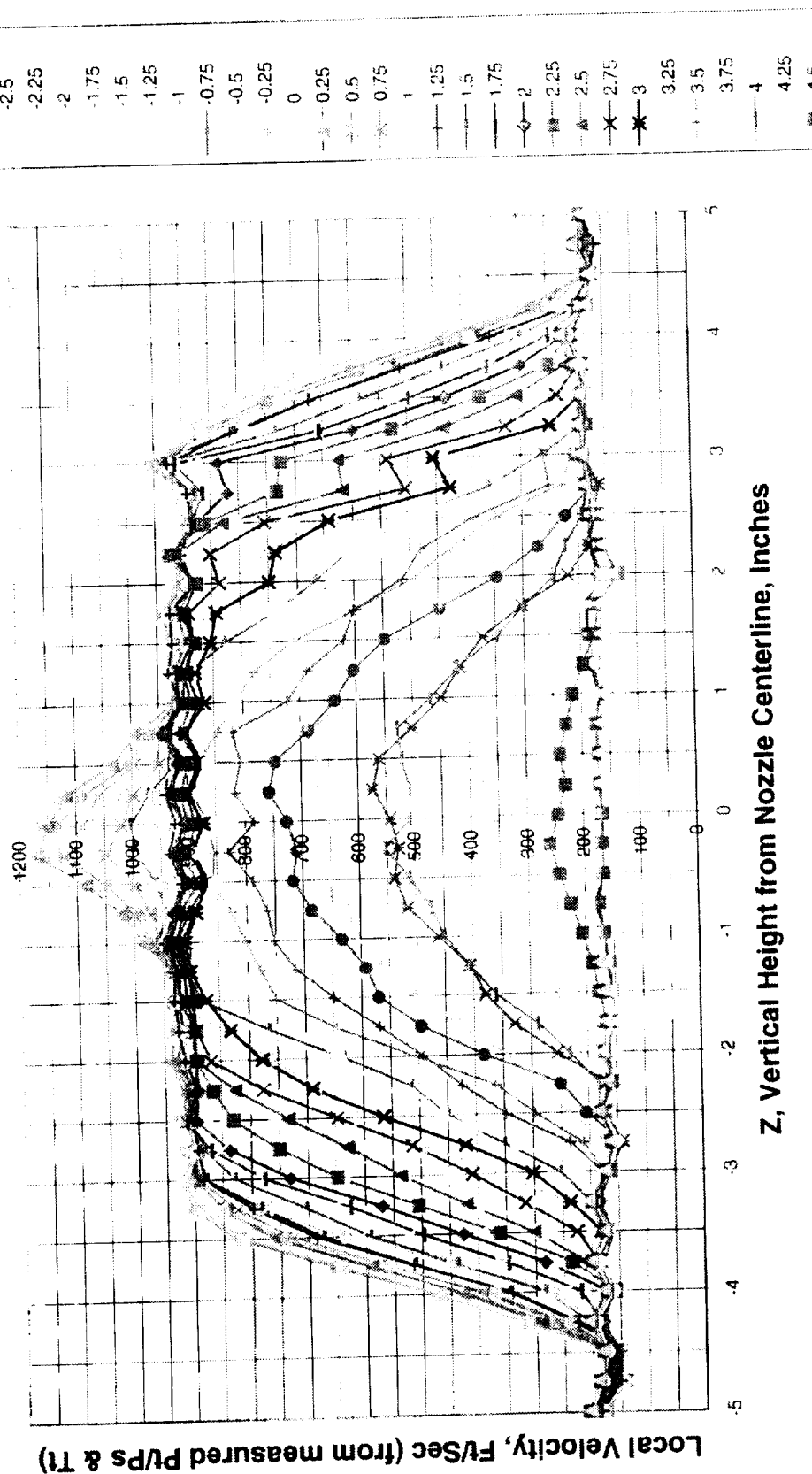


FIGURE 29

20L Deep Mixer, 100% Nozzle Length, Velocity Survey at $x/D=3.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg# V558

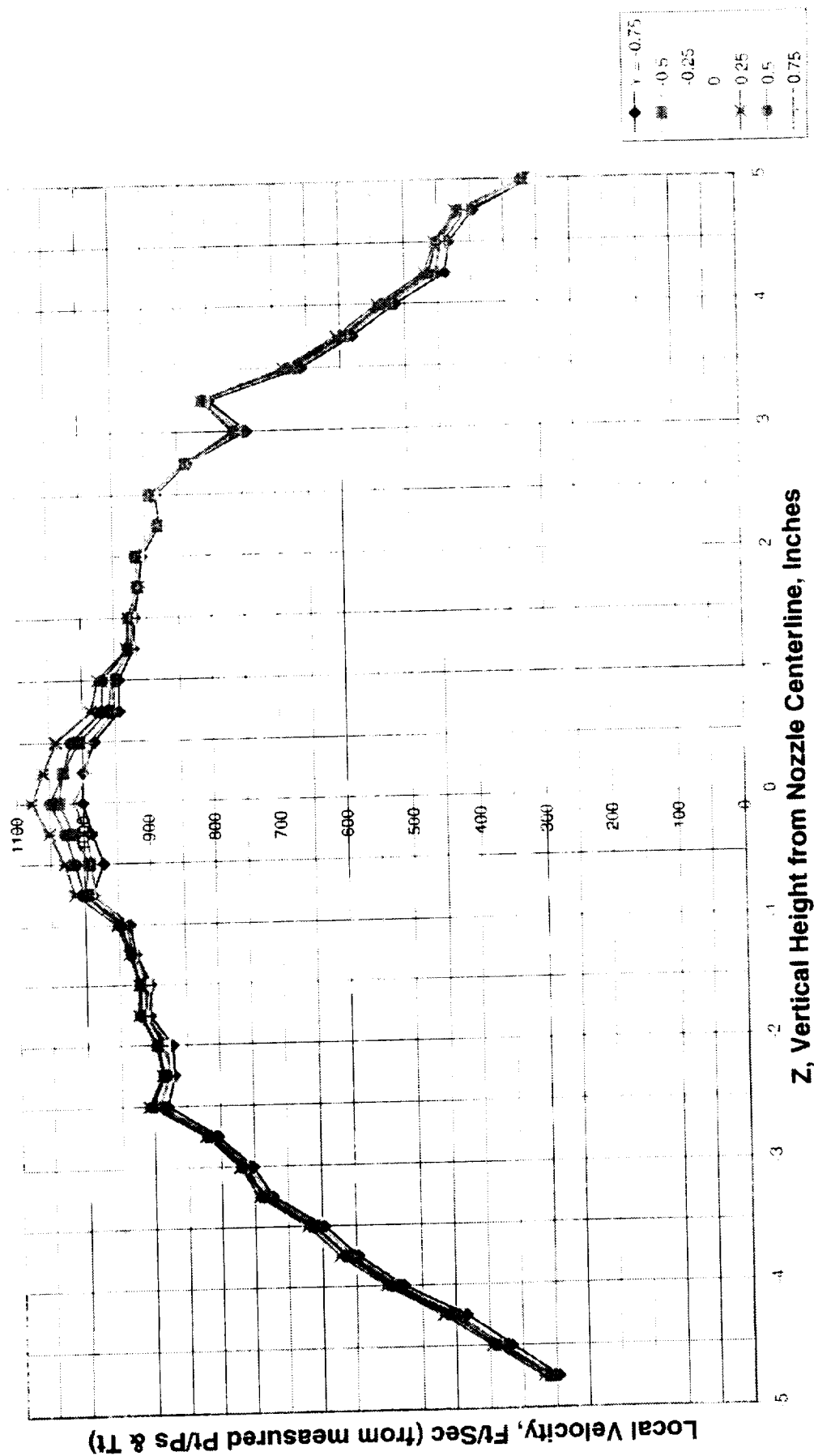


FIGURE 30

20L Deep Mixer, 100% Nozzle Length, Velocity Survey at $x/D=5.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V549

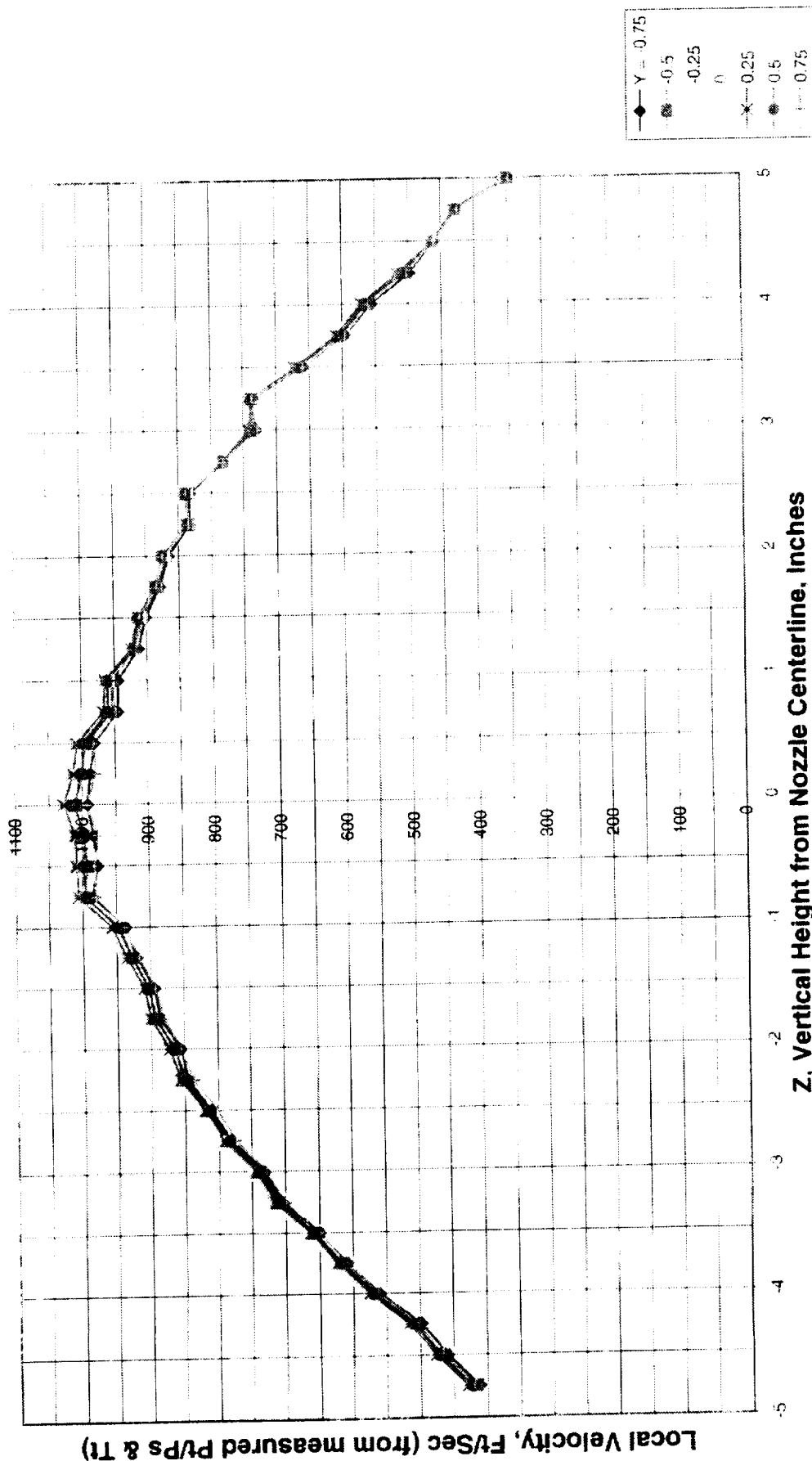


FIGURE 31

20L Deep Mixer, 100% Nozzle Length, Velocity Survey @ $x/D=7.5$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdbg # V548

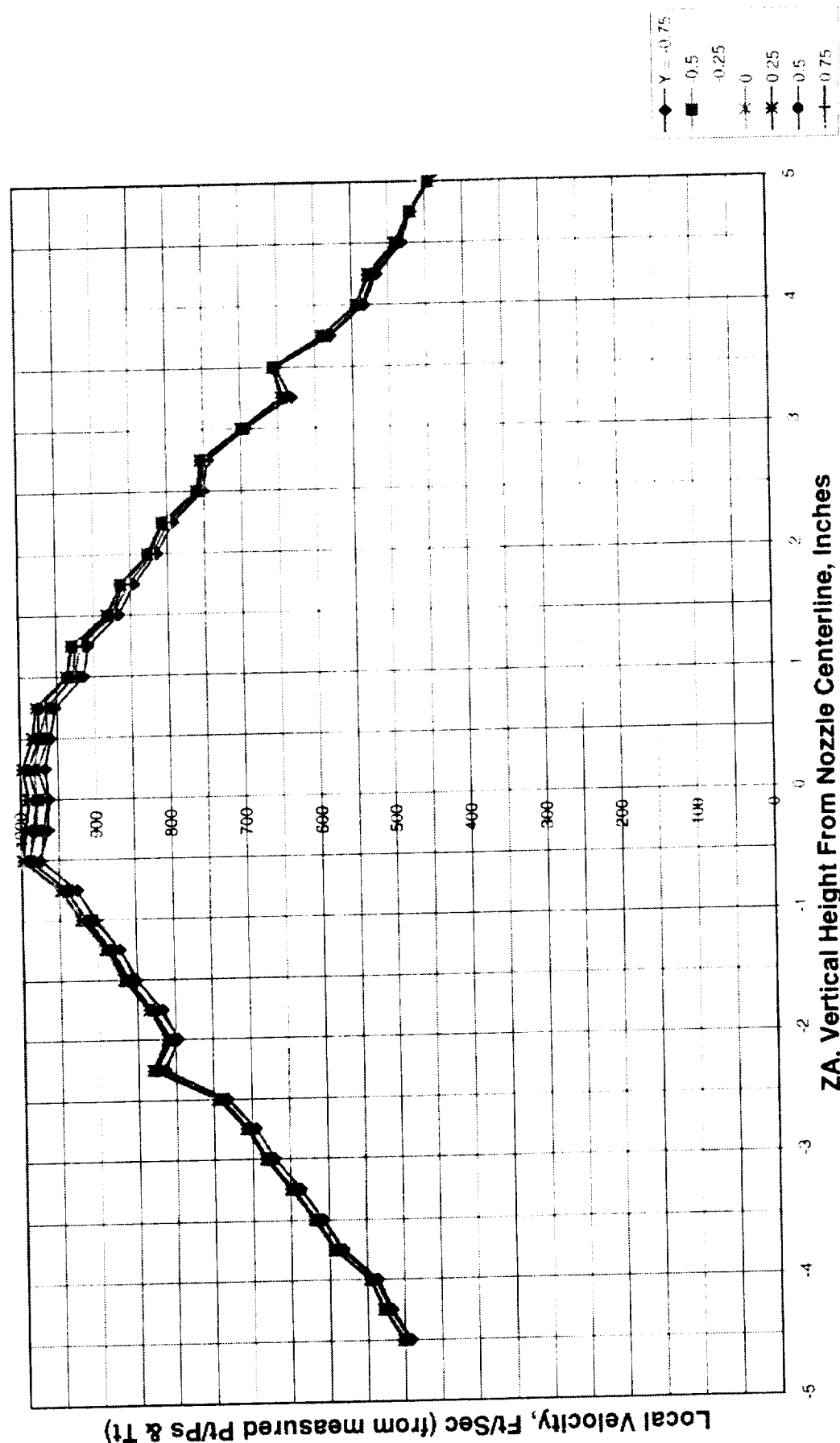


FIGURE 32

20L Deep Mixer, 100% Nozzle Length, Velocity Survey @ $x/D=10.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V547

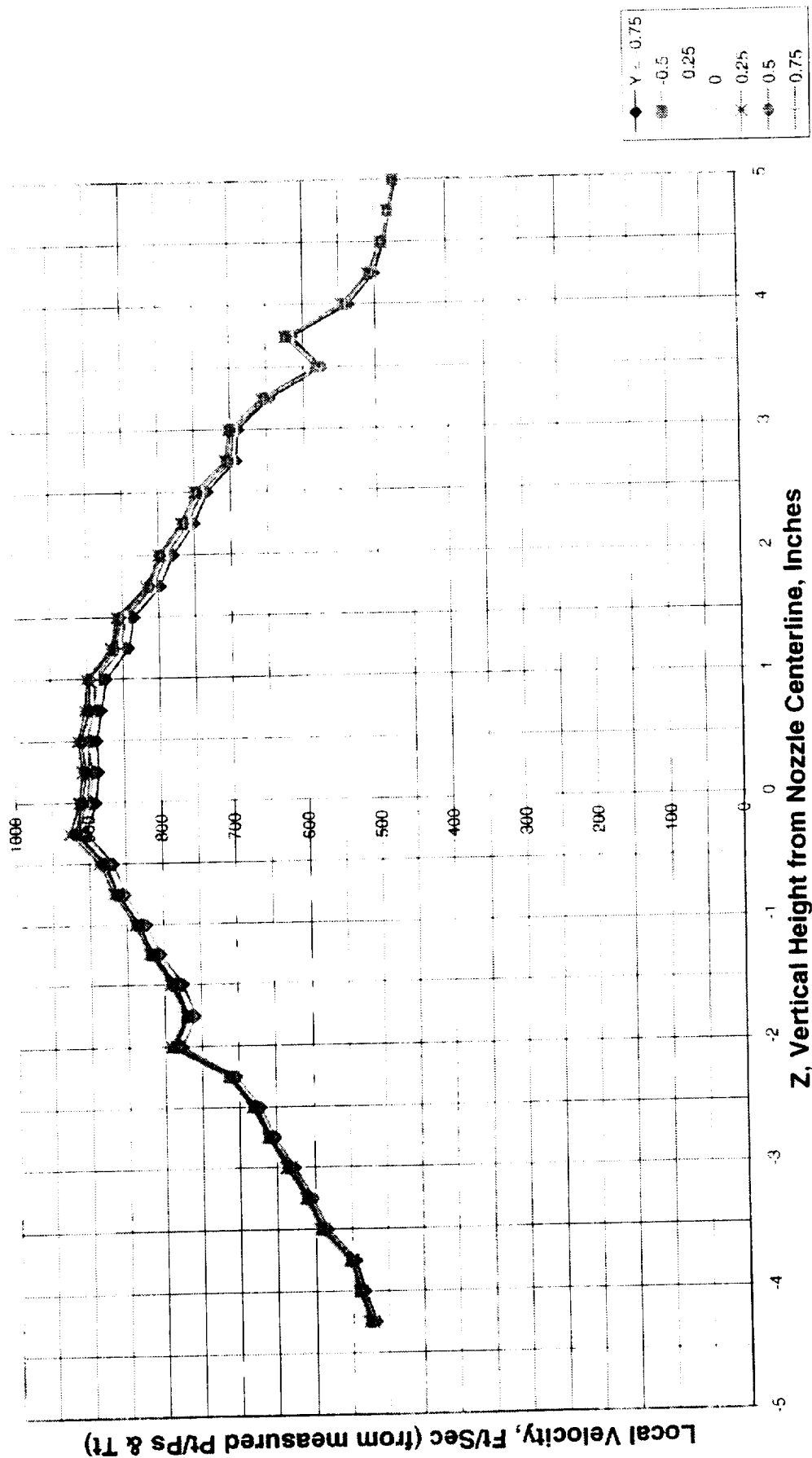


Figure 33(a). 12L Baseline with Cutouts (12CL), 100% Nozzle Length, Velocity Survey @ $x/D=0.2$,
 1.54 NPR)core, 1.61 NPR)fan, 2.62 Ti)core/Ti)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic
 Mixer/Plume Tests Rdg # V575

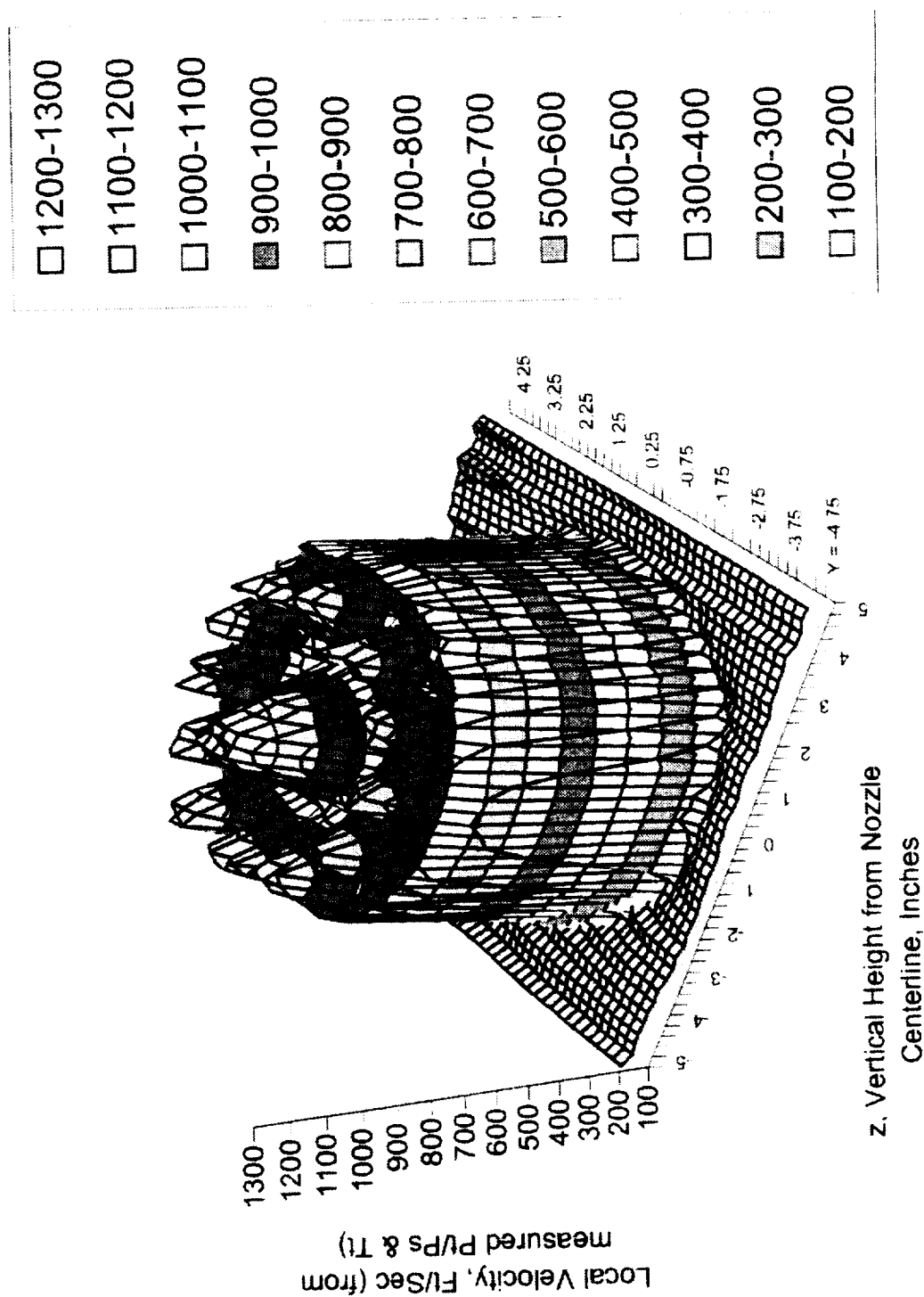


FIGURE 33 (b)

12L Baseline with Cutouts, 100% Nozzle Length, Velocity Survey @ $x/D=0.2$, 1.54 NPR)core,
 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests
 Rdg # V575

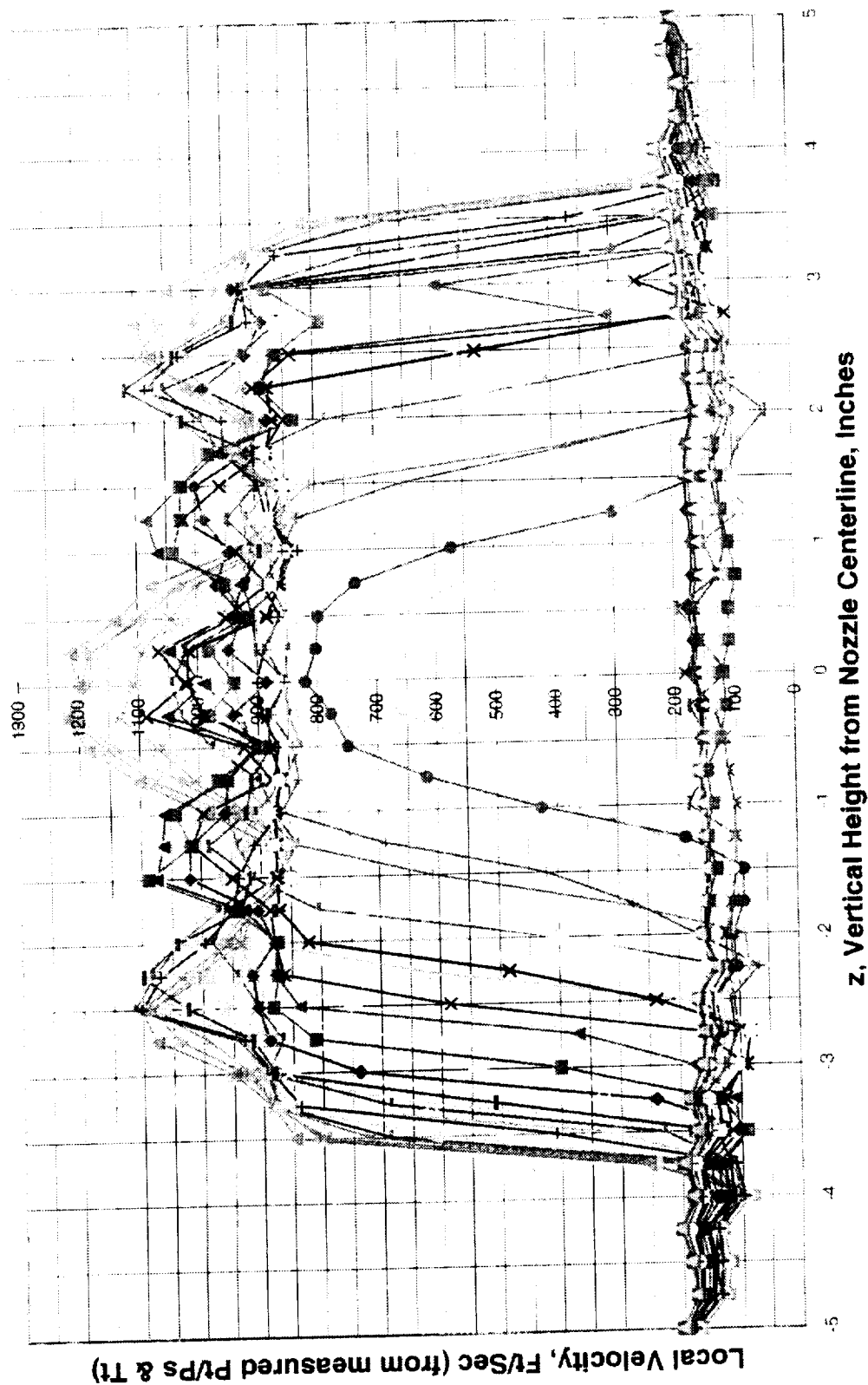


FIGURE 34

12L Baseline Mixer with Cutouts, 100% Nozzle Length, Velocity Survey @ $x/D=0.5, 1.54$
 NPR)core, 1.61 NPR)fan, 2.62 Tt)core(Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic
 Mixer/Plume Tests Rdg # V573

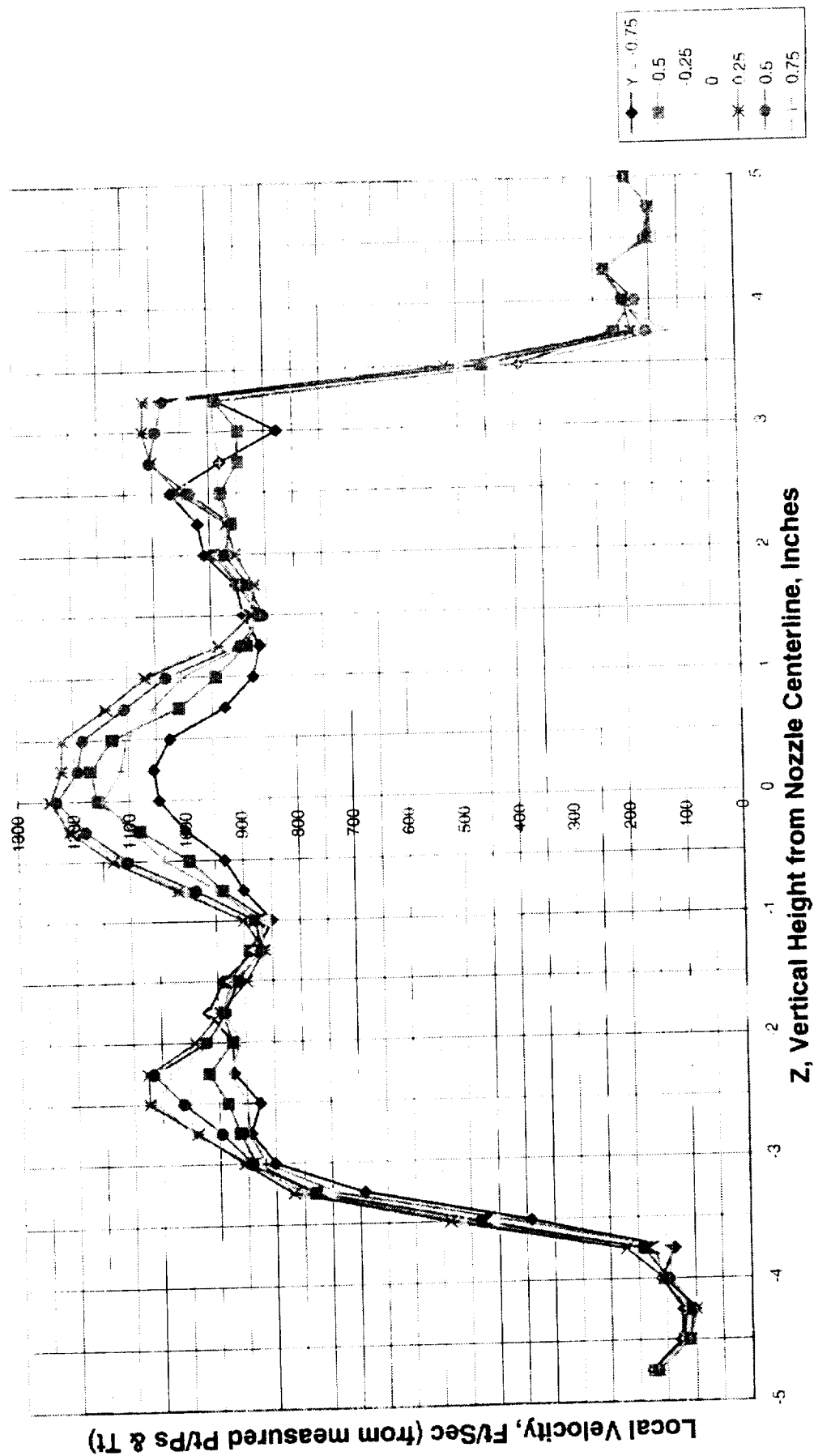


Figure 35(a). 12L Baseline Mixer with Cutouts, 100% Nozzle Length, Velocity Survey @ $x/D=1.0$,
 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic
 Mixer/Plume Tests Rdg # V574

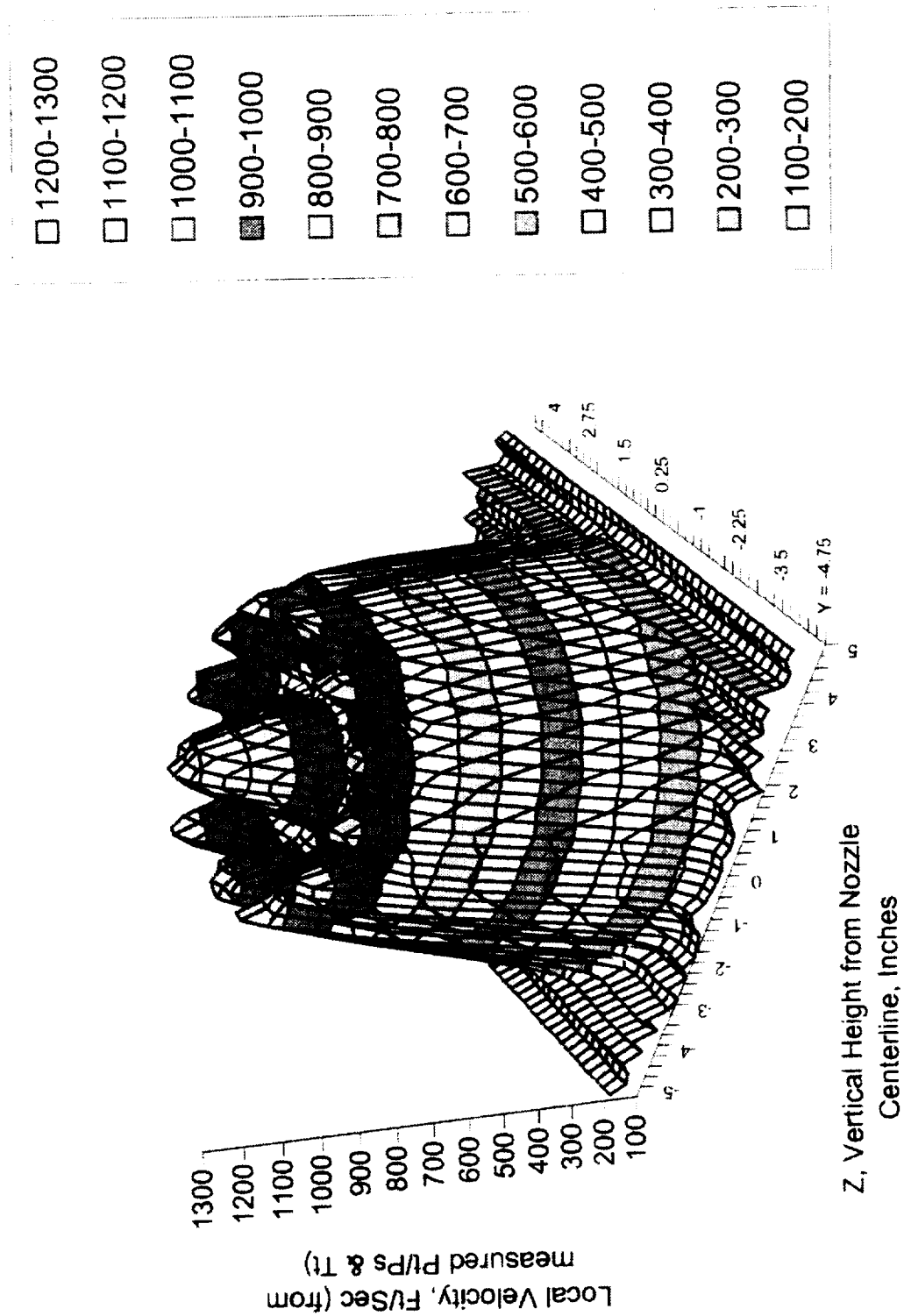


FIGURE 35 (b)

12L Baseline Mixer with Cutouts, 100% Nozzle Length, Velocity Survey @ $x/D=1.0, 1.54$
 NPR)core, 1.61 NPR)fan, 2.62 Tt)core(Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic
 Mixer/Plume Tests Rdg # V574

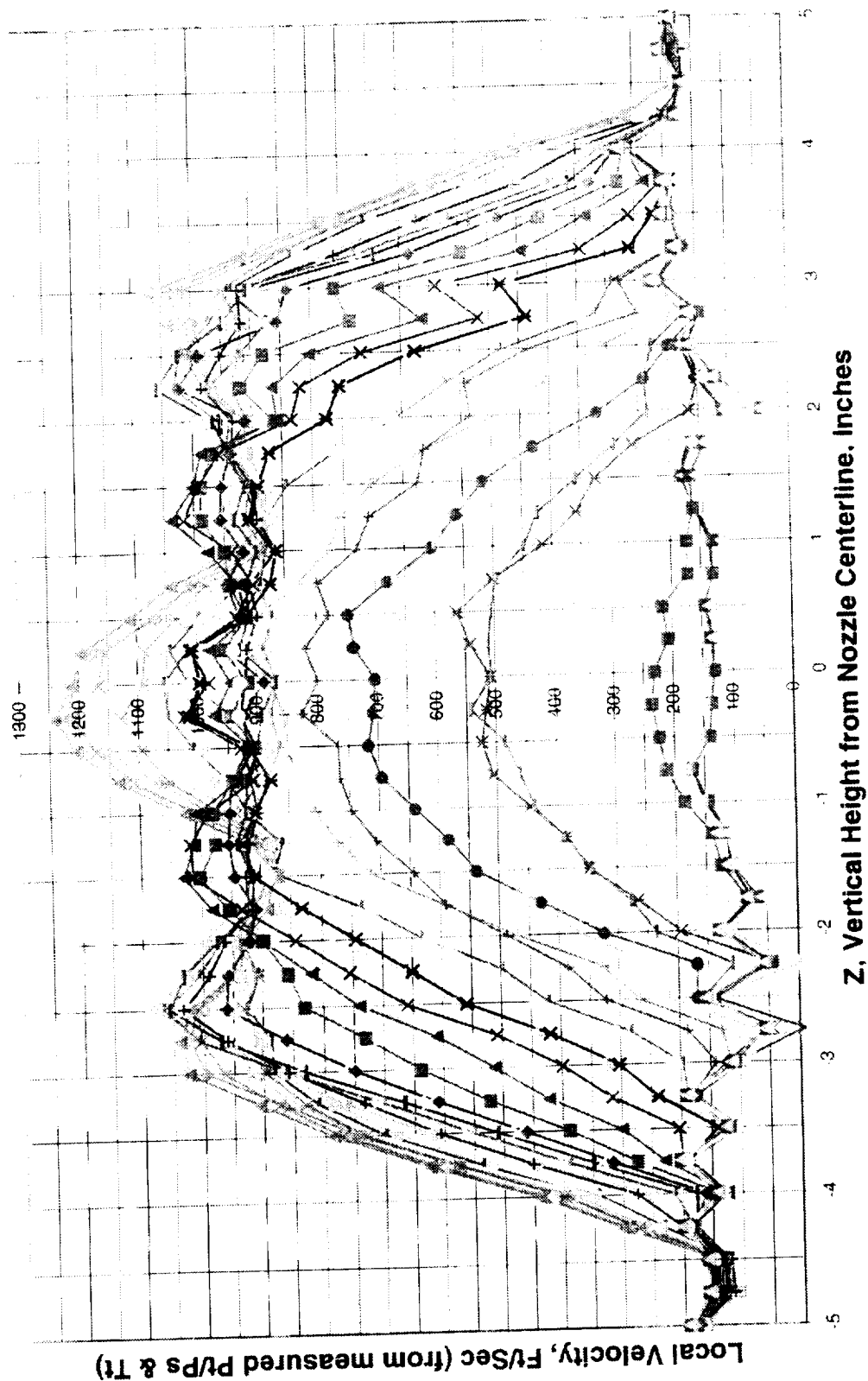


FIGURE 36

12L Baseline with Cutouts, 100% Nozzle Length, Velocity Survey @ $x/D=3.0$, 1.54 NPR)core,
1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests
Rdg # V572

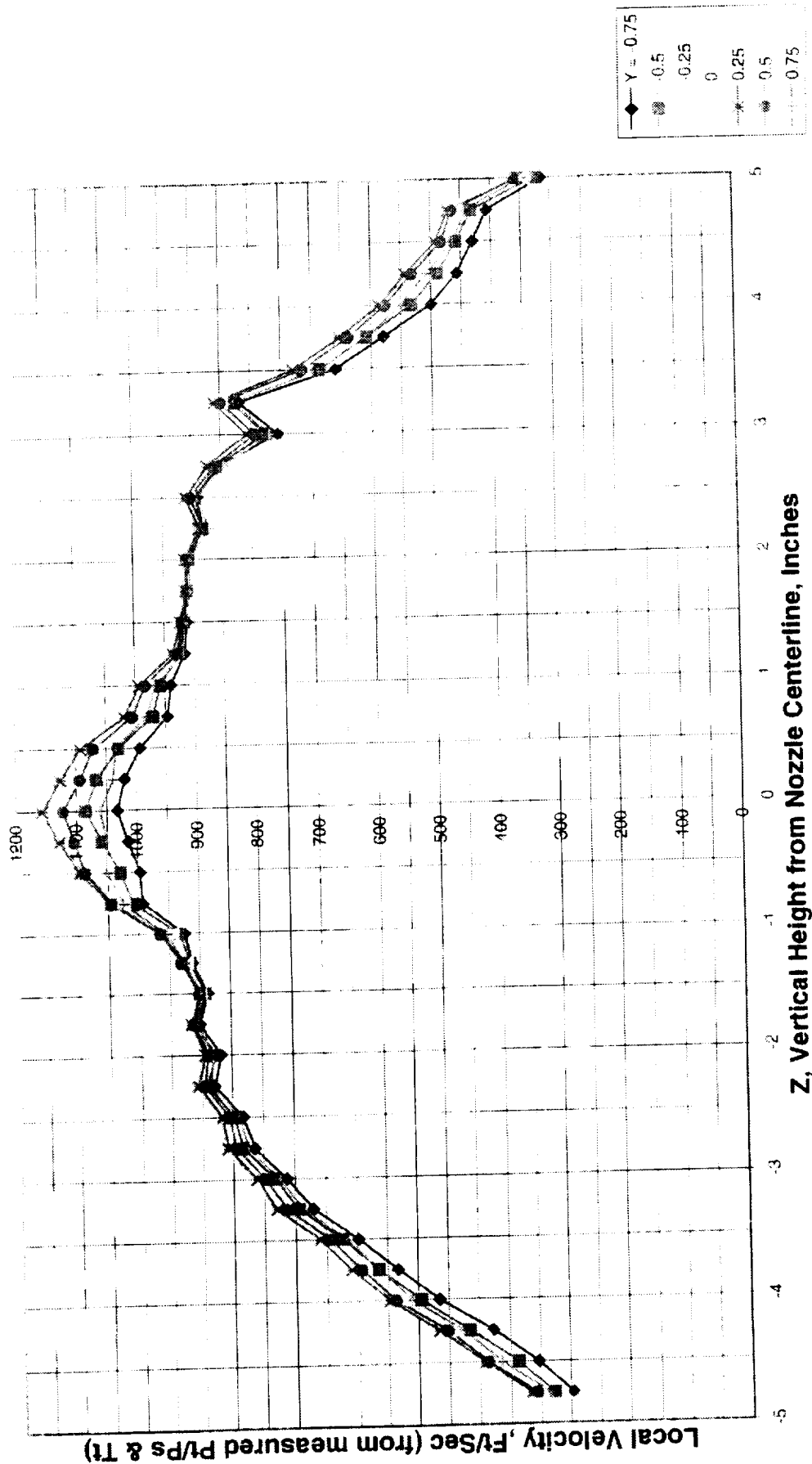


FIGURE 37

12L Baseline Mixer with Cutouts, 100% Nozzle Length, Velocity Survey @ $x/D=5.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V571

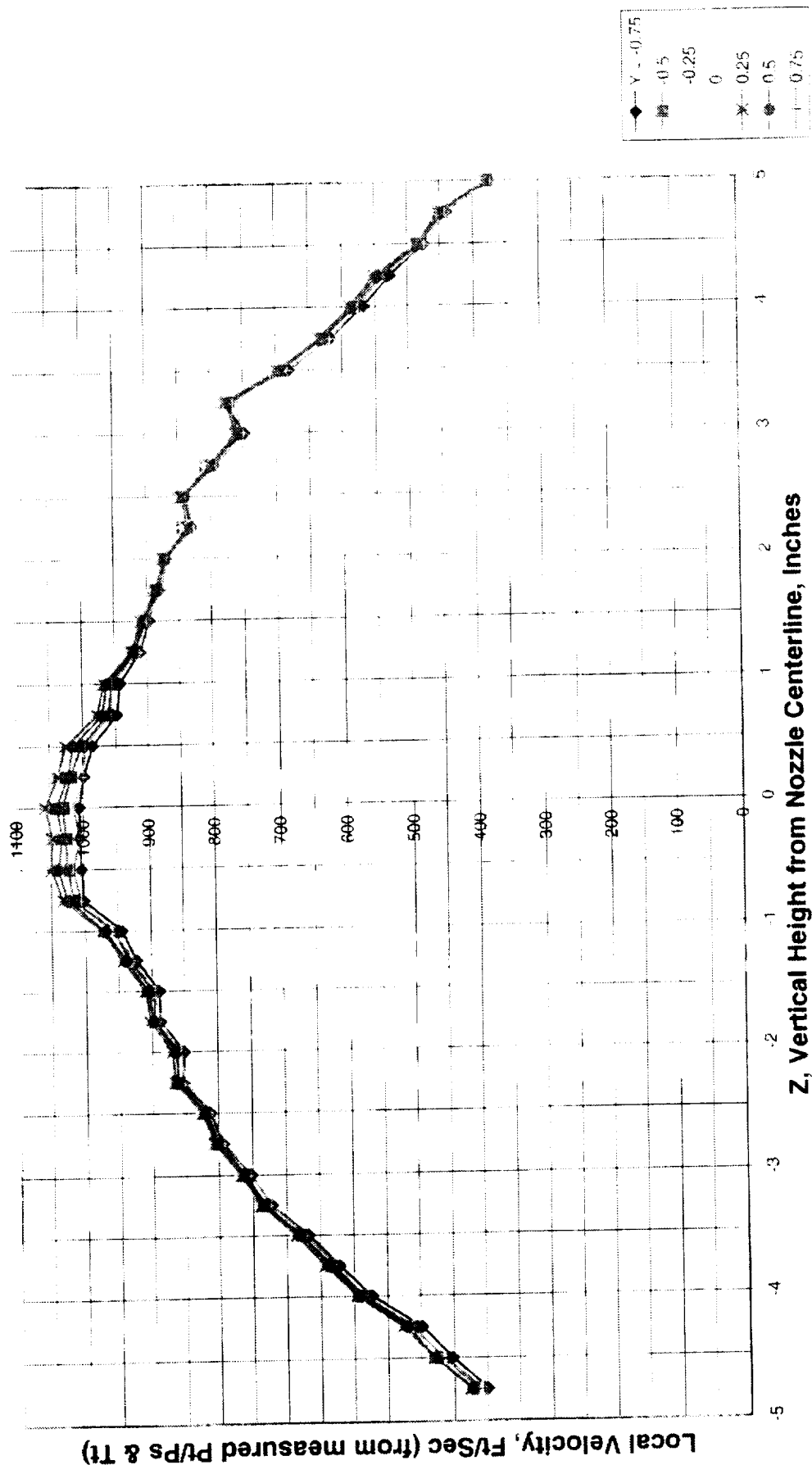


FIGURE 38

12L Baseline Mixer with Cutouts, 100% Nozzle Length, Velocity Survey @ $x/D=7.5$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core(Tt)fan, 0.2 Mn)FS: 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V570

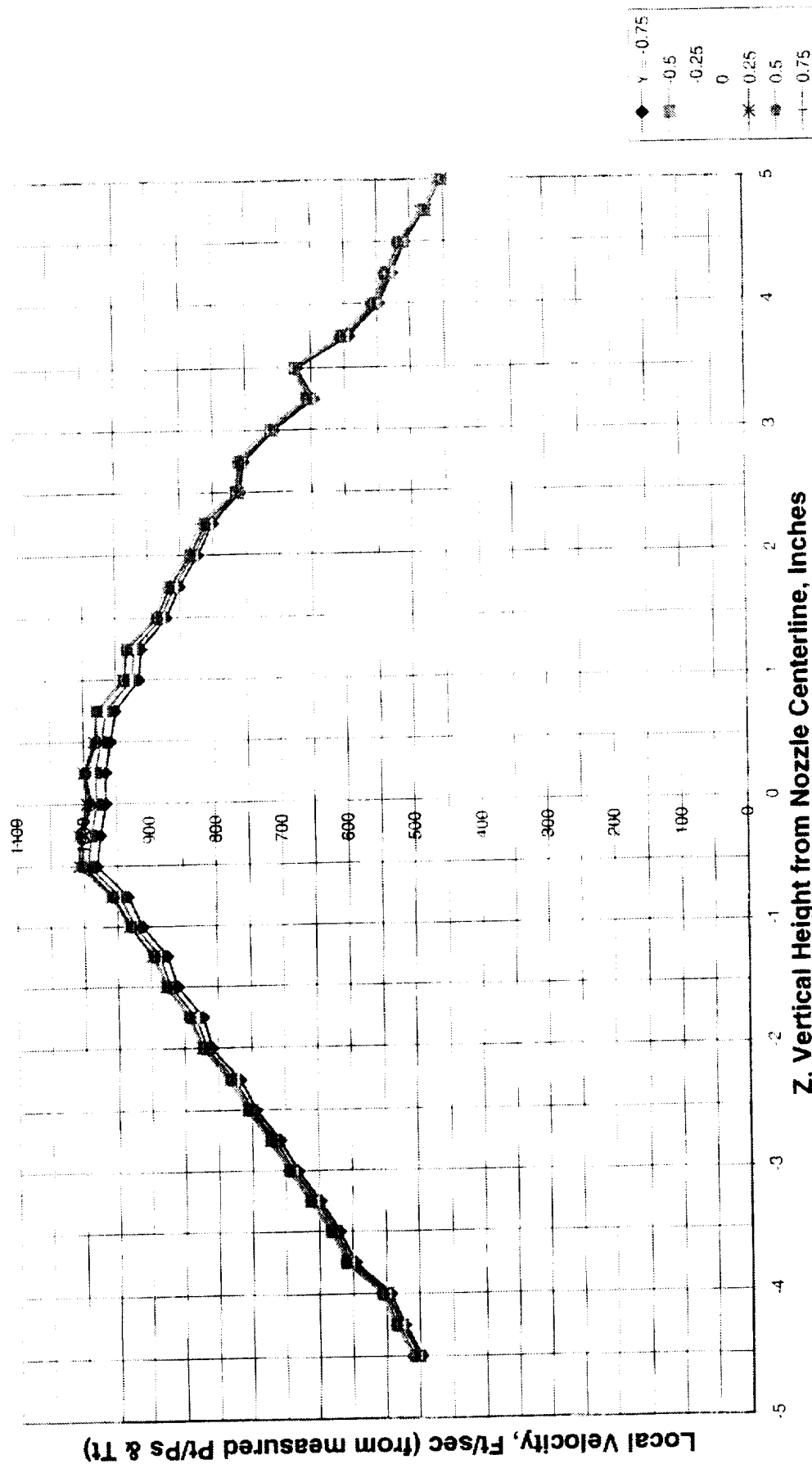


FIGURE 39

12L Baseline Mixer with Cutouts, 100% Nozzle Length, Velocity Survey @ $x/D=10.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V569

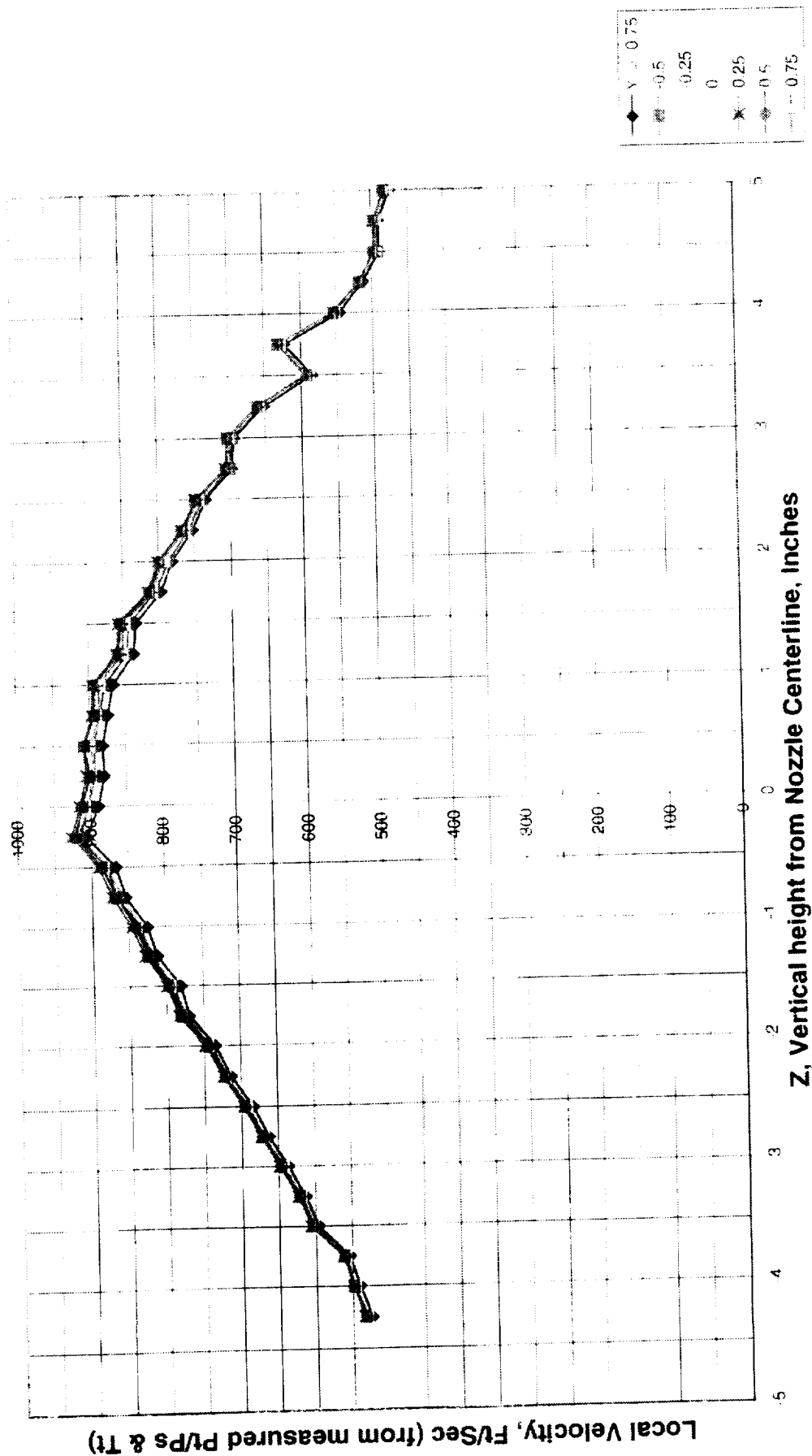


Figure 40(a). Velocity profiles for 12CL mixer with 100% nozzle length at $X/D=0.2$ for TO #3 at $M(fj) = 0.2$.

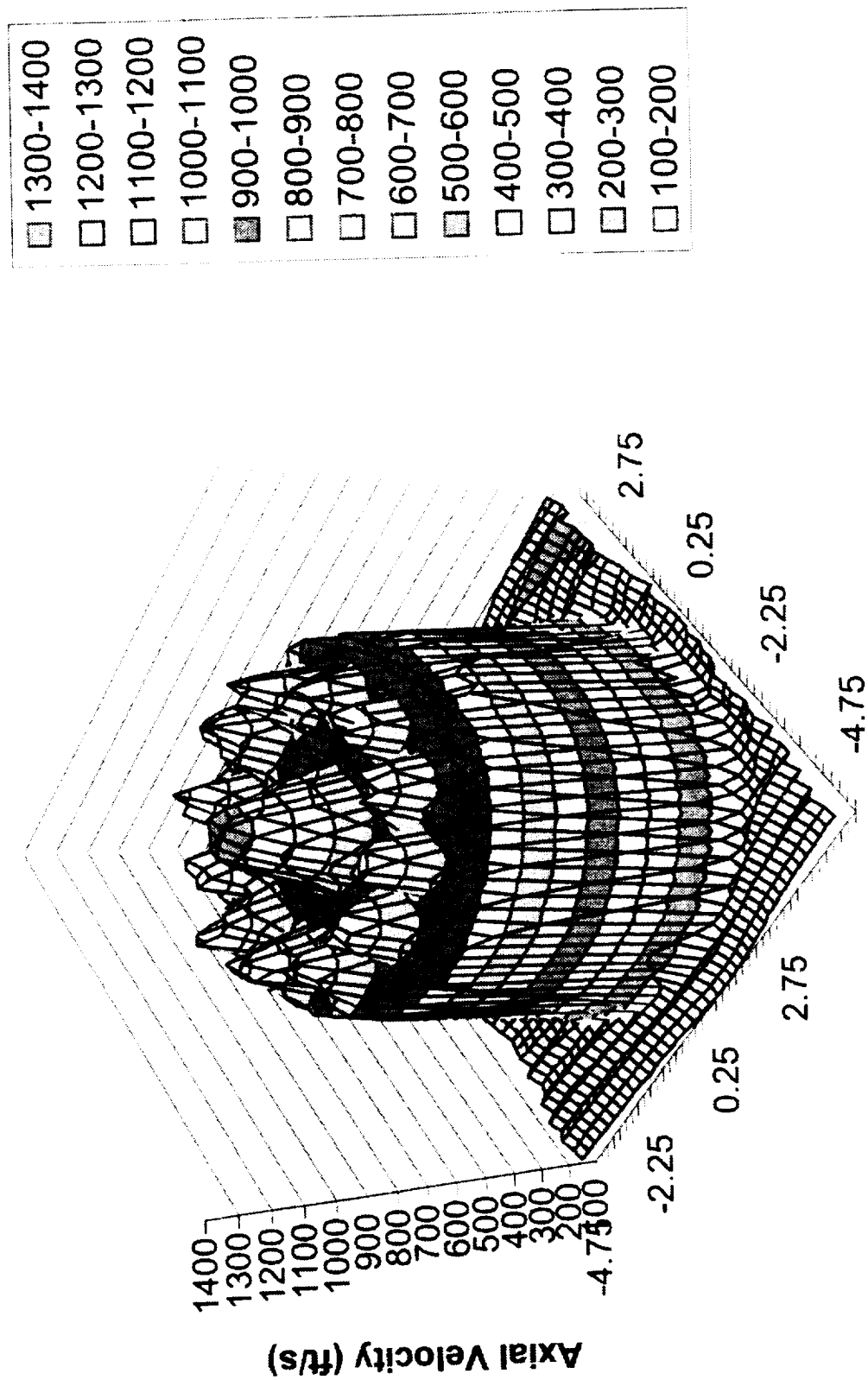


FIGURE 40(b)

12L Baseline Mixer w/100% Nozzle Length, Velocity Survey at $x/D=0.2$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V576

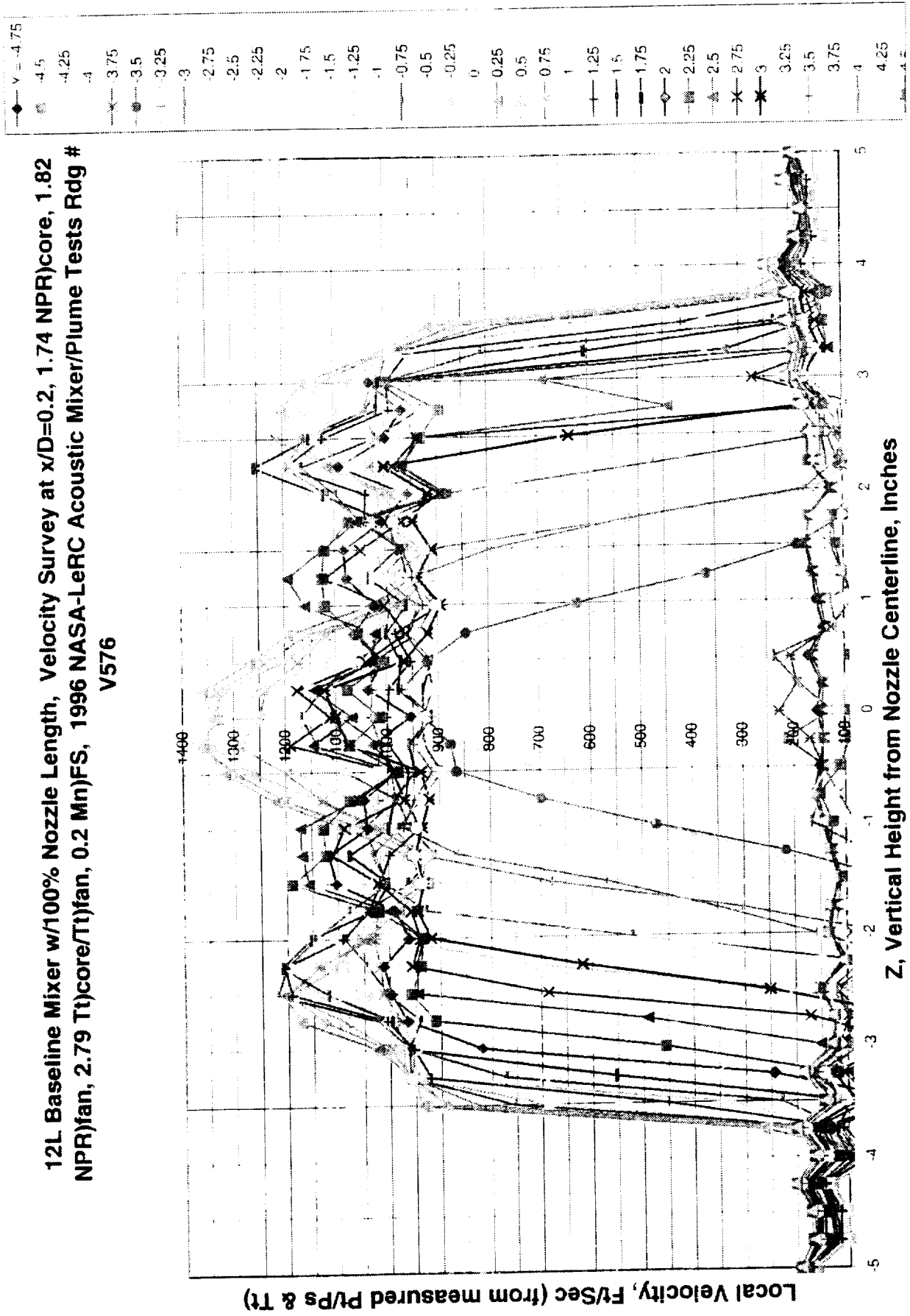


FIGURE 41

12L baseline Mixer w/100% Nozzle Length, Velocity Curve at $x/D=0.5$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core(Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V578

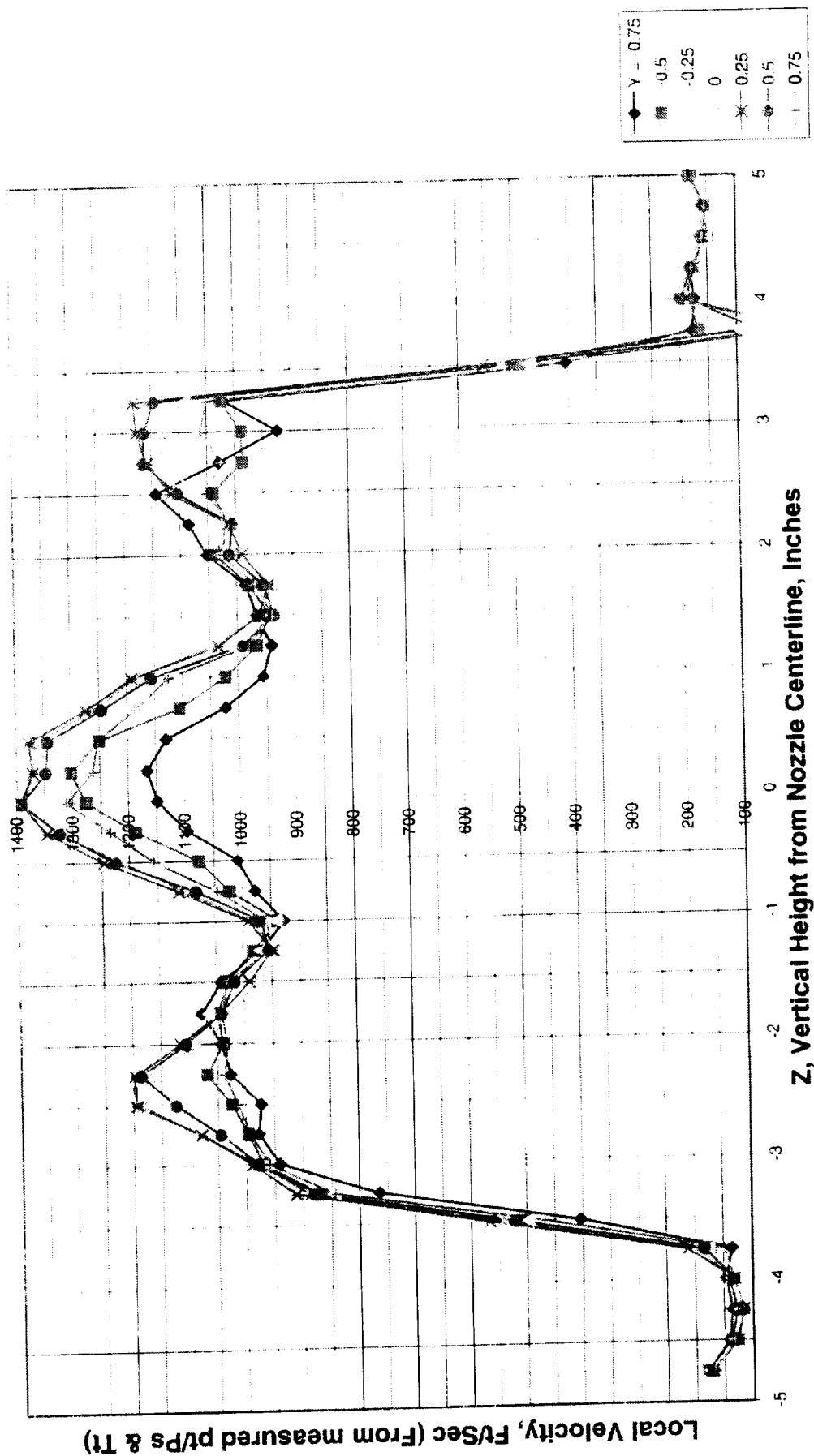


Figure 42(a). 12L Baseline Mixer (12CL) w/100% Nozzle Length, Velocity Survey at $x/D=1.0$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V577

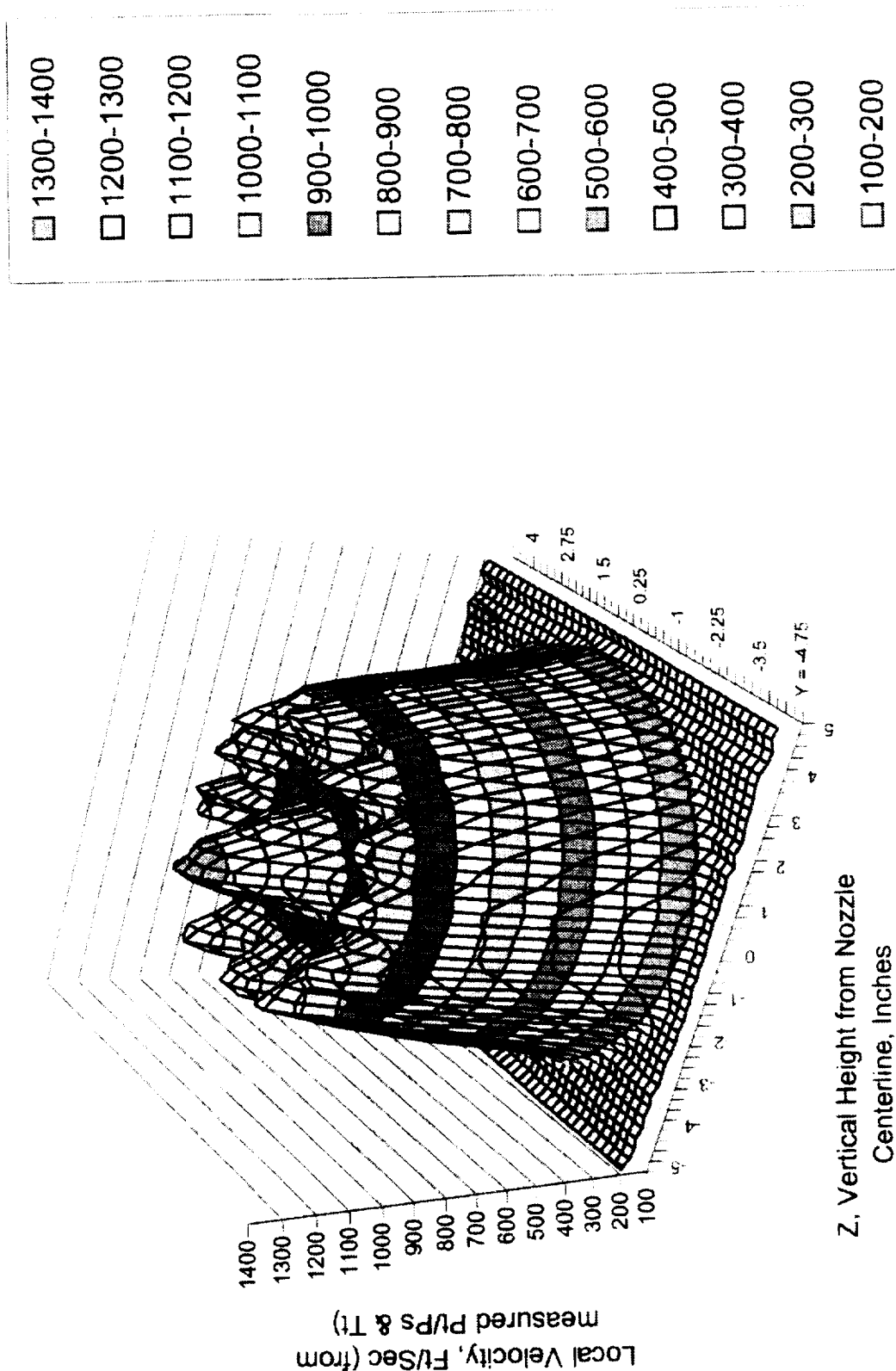


Figure 42(b). Zoom for 12L Baseline Mixer (12CL) w/100% Nozzle Length, Velocity Survey at
 $x/D=1.0$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic
 Mixer/Plume Tests Rdg # V577

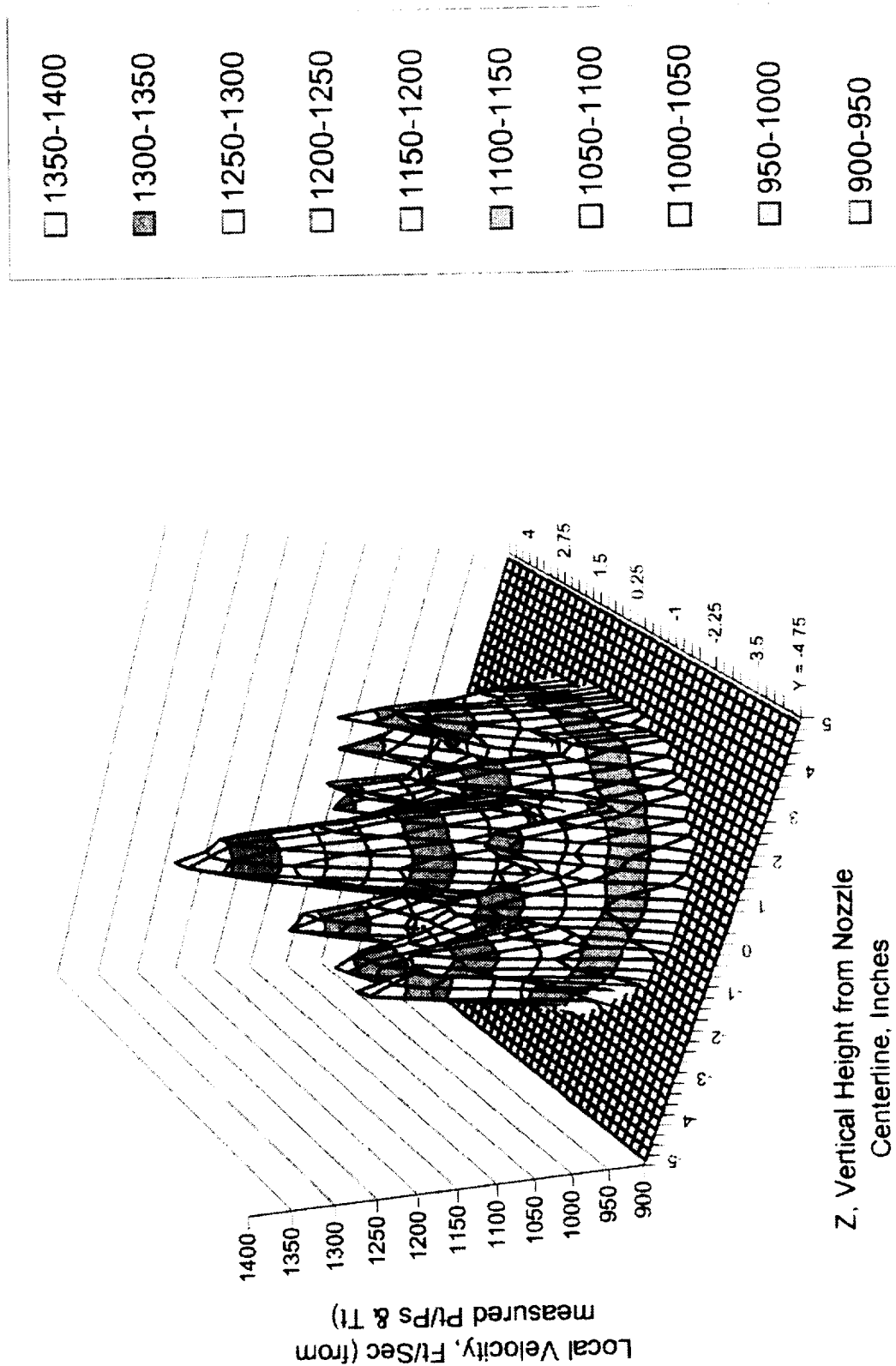


FIGURE 42 (c)

12L Baseline Mixer w/100% Nozzle Length, Velocity Survey at $x/D=1.0$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core(Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V577

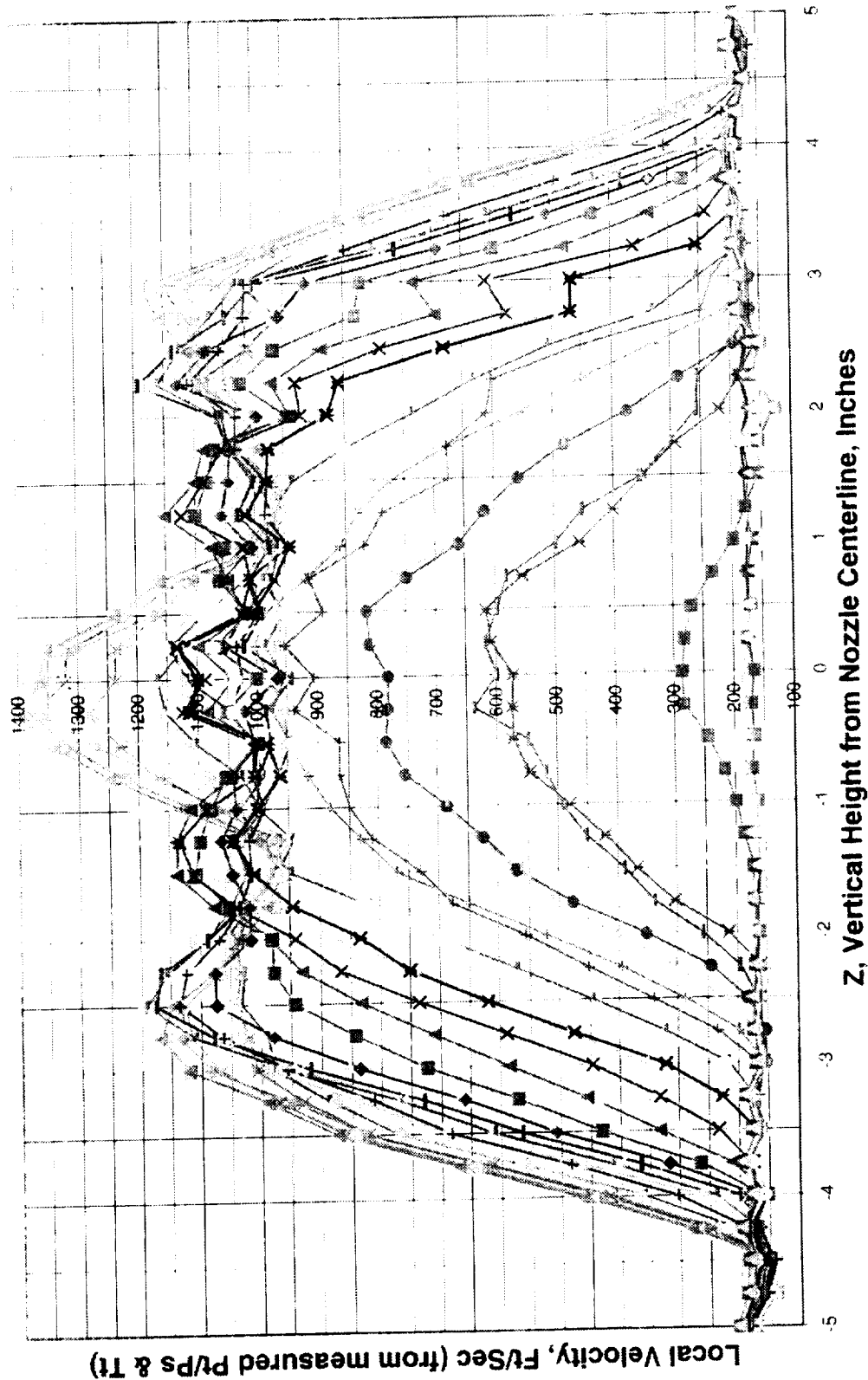


FIGURE 43

12L Baseline Mixer w/100% Nozzle length, Velocity Survey at $x/D=3.0$, 1.74 NPR)core,1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRc Acoustic Mixer/Plume Tests Rdg # V579

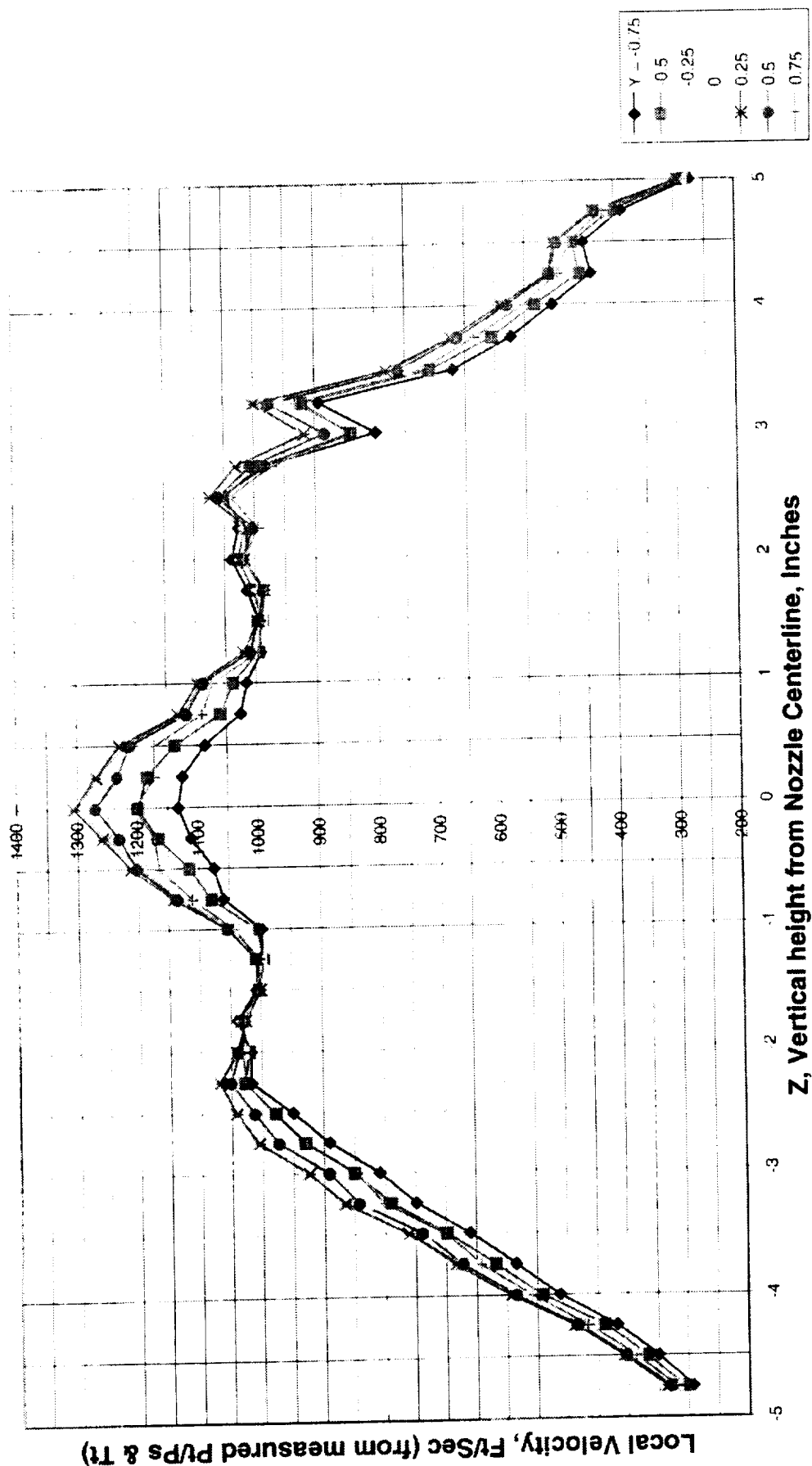


FIGURE 44

12L Baseline Mixer w/100% Nozzle Length, Velocity Survey at $x/D=5.0$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V580

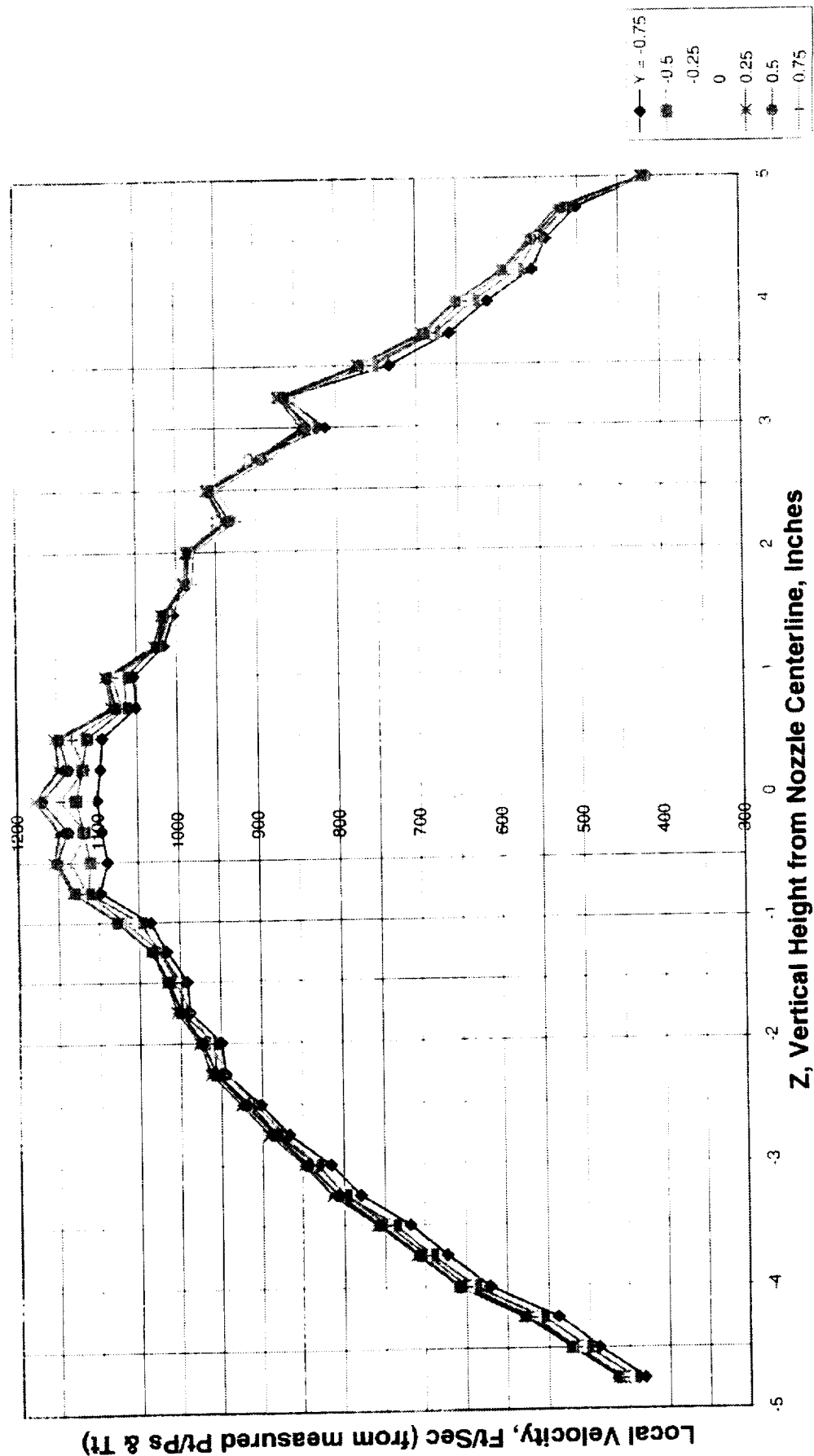
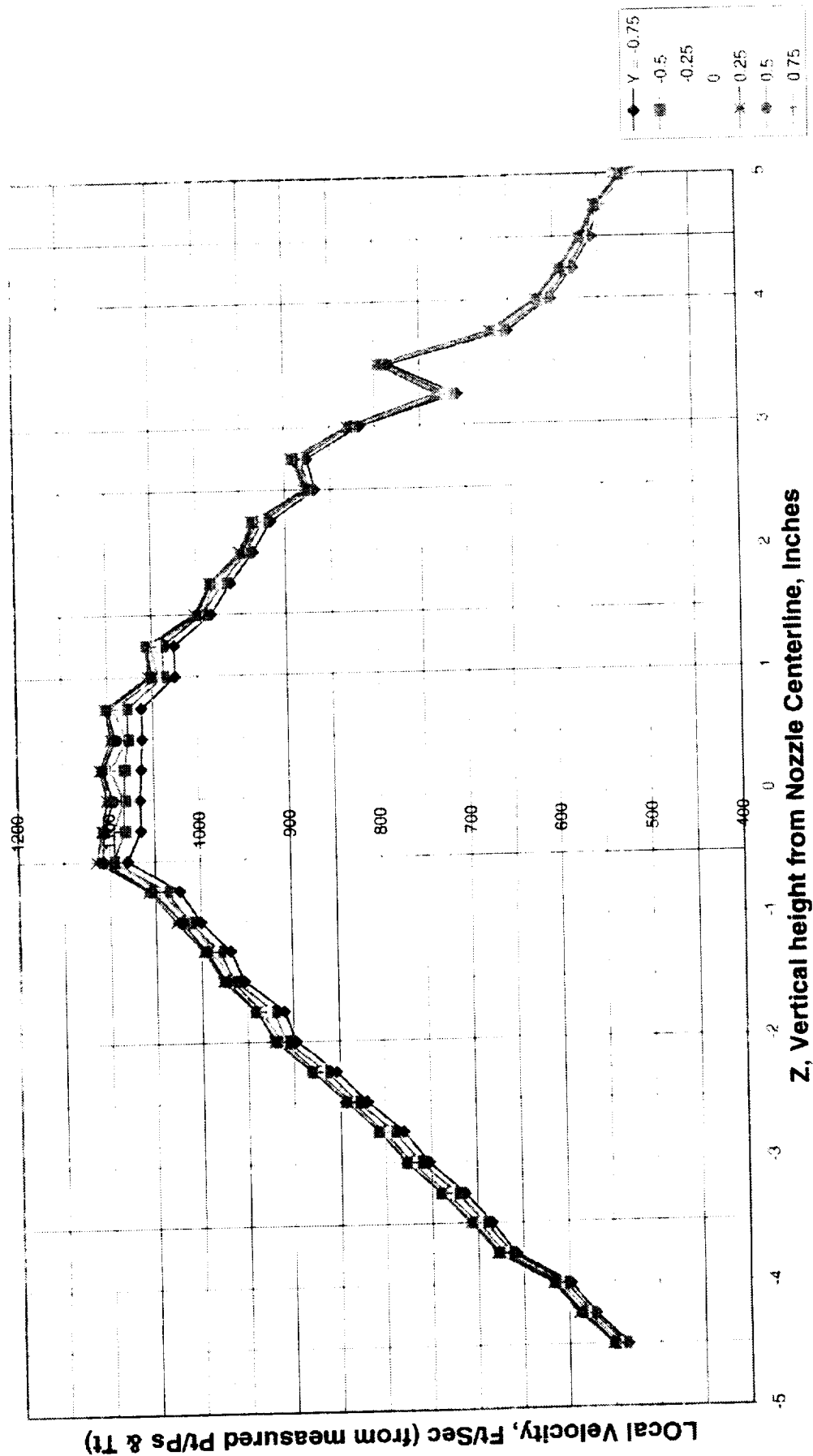


FIGURE 45

12L Baseline Mixer w/ 100% Nozzle Length, Velocity Survey at $x/D=7.5$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core(Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdbg # V581



12L Baseline Mixer w/ 100% Nozzle Length, Velocity Survey at $x/D=10.0$, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V582

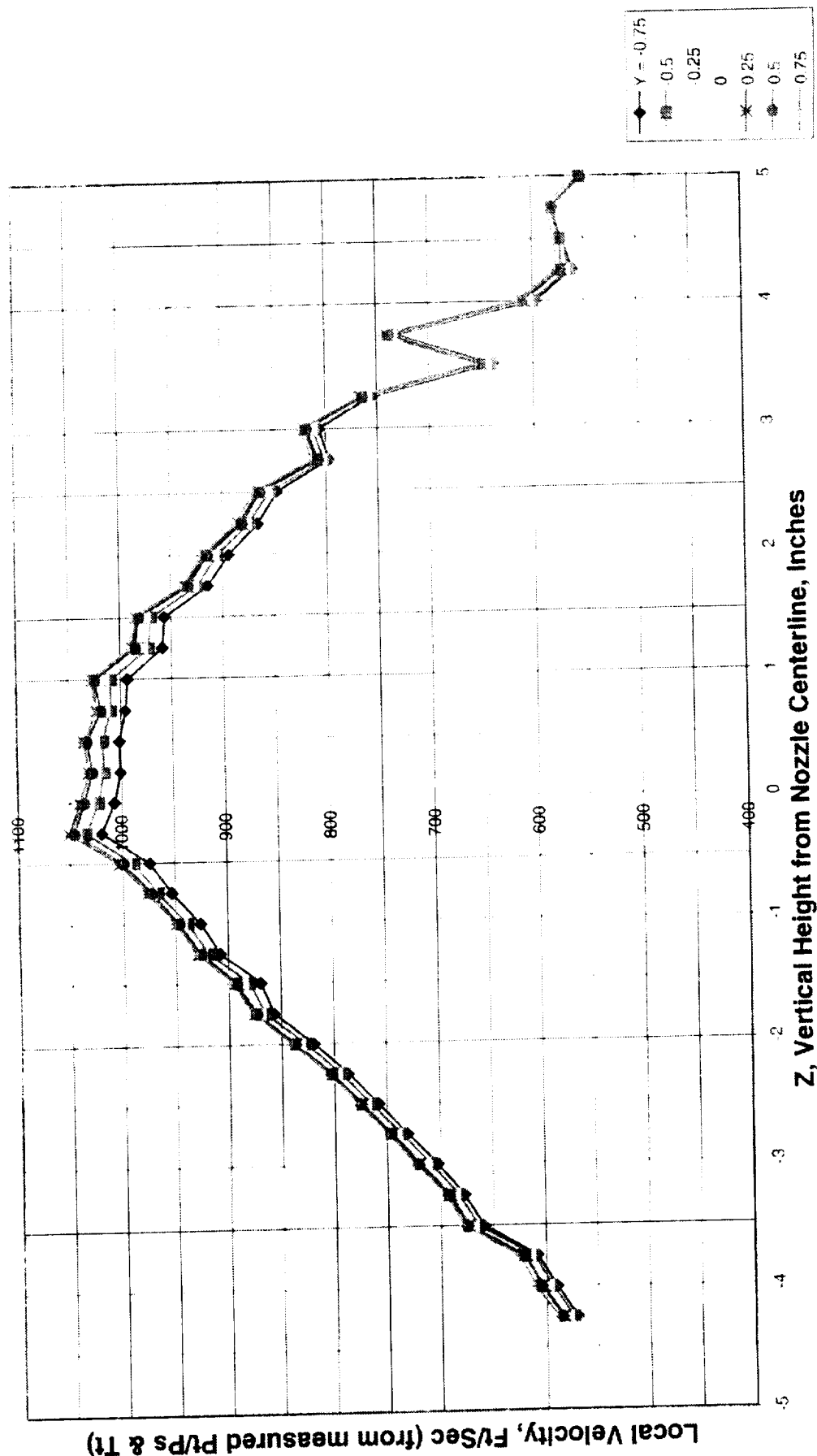
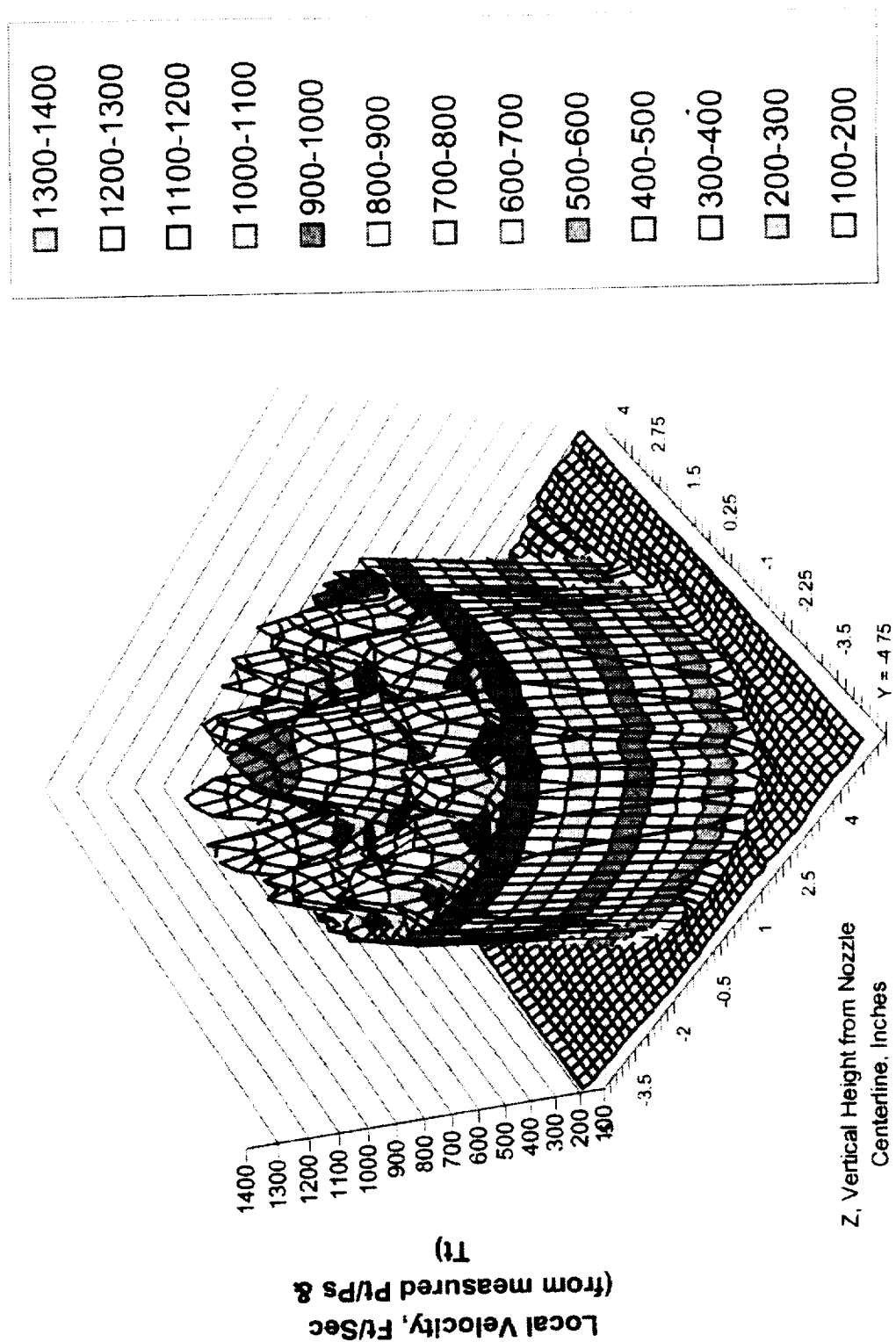


FIGURE 46

Figure 47. 12 L Baseline Mixer (12CL) w/ 100% Nozzle Length Velocity Survey at $x/D=0.2$, 1.74 NPR)core, 1.82 NPR)core, 0.2 Mn)FS, 2.79Tt)core/Tt)fan, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V597



12L Baseline Mixer w/50% Nozzle Length Velocity Survey at $x/D=0.5$, 1.74 NPR)core, 1.82 NPR)fan, 0.2 Mn)FS, 2.79 Tt)core/Tt)fan, 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg# V598

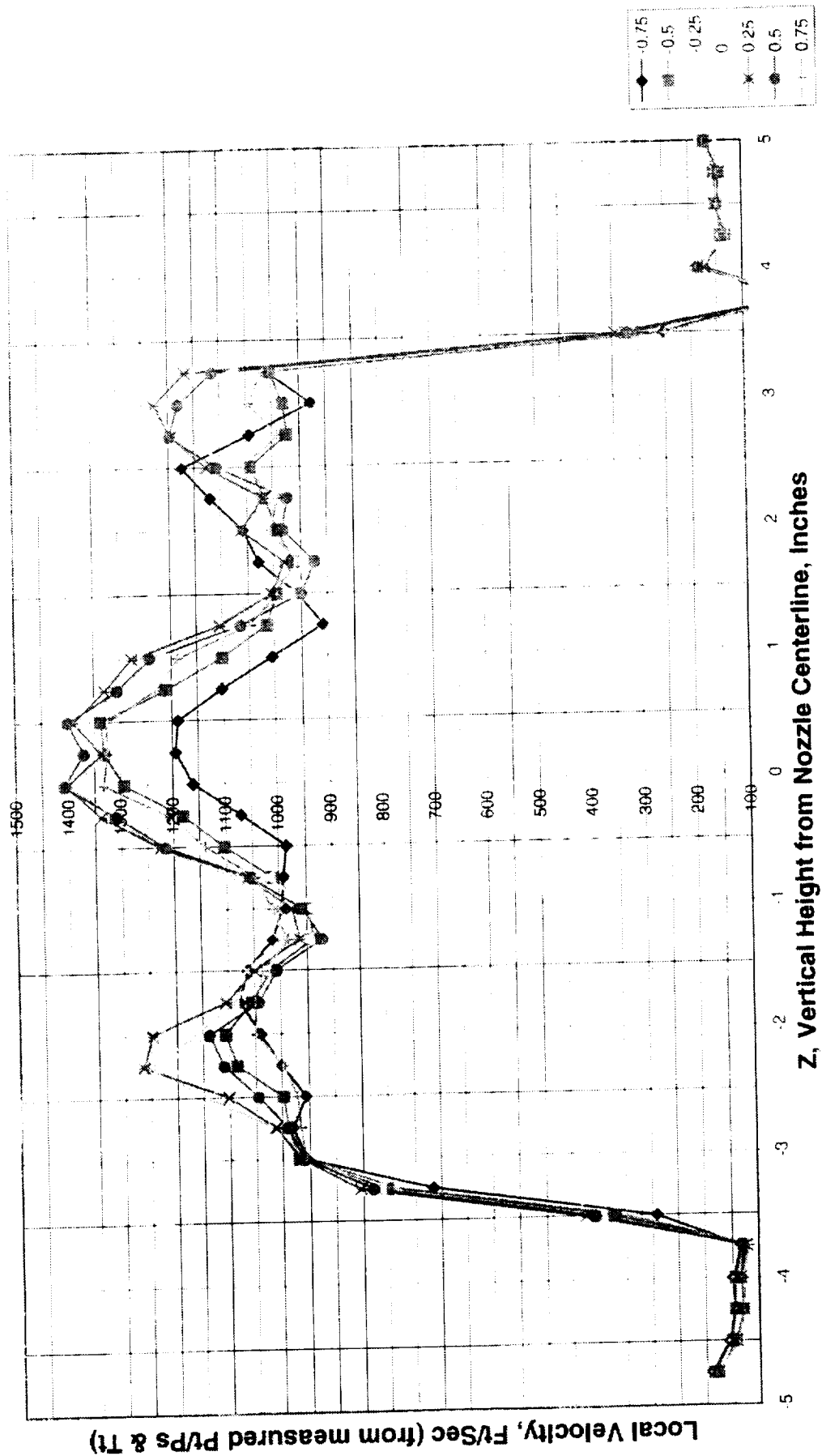


FIGURE 48

FIGURE 49

12L Baseline Mixer w/50% Nozzle Length Velocity Survey at $x/D=1.0$, 1.74 NPR)core, 1.82 NPR)fan, 0.2 Mn)FS, 2.79 Tt)core/Tt)fan, 1966 NASA-LeRC Acoustic Mixer/Plume Tests Rdg# V599

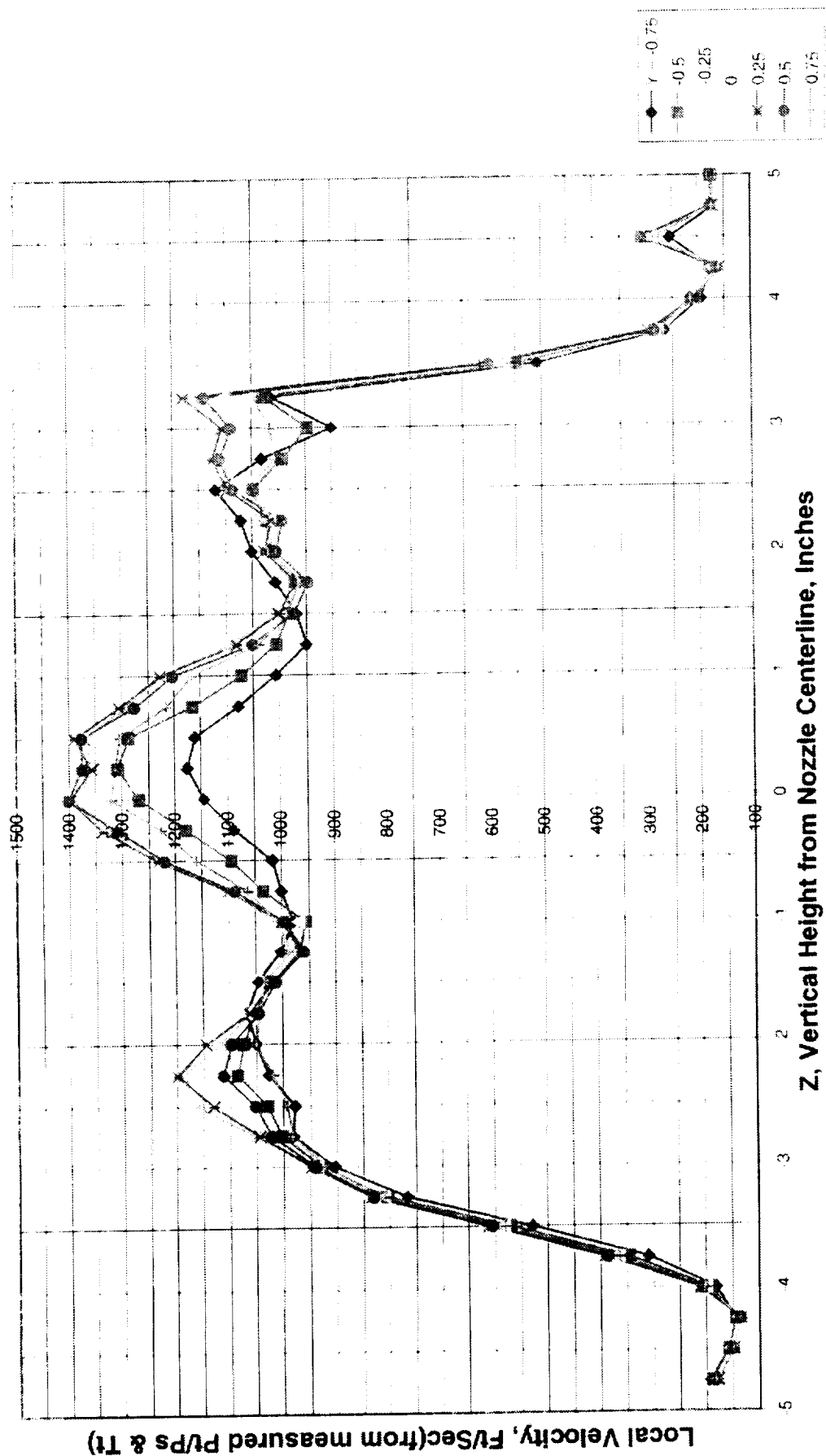
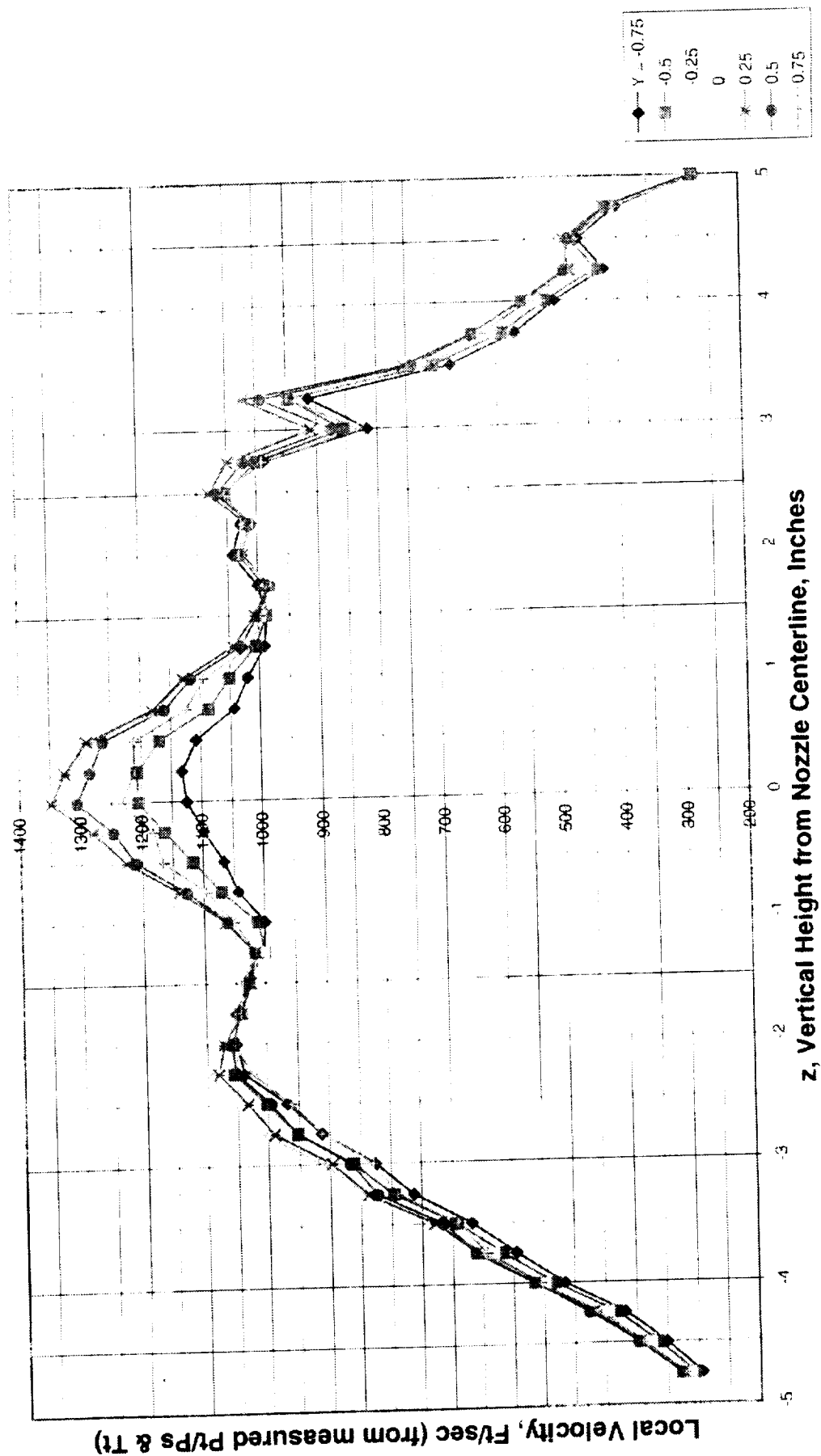


FIGURE 50

12L Baseline Mixer w/50% Nozzle Length Velocity Survey at $x/D=3.0$, 1.74 NPR)core, 1.82 NPR)fan, 0.2 Mn)FS, 2.79 Tt)core(Tt)fan, 1966 NASA-LeRC Acoustic Mixer/Plume Tests Rdg# V600



12L Baseline Mixer w/50% Nozzle Length Velocity Survey at $x/D=5.0$, 1.74 NPR)core, 1.82 NPR)fan, 0.2 Mn)FS, 2.79 Tt)core/Tt)fan, 1966 NASA-LeRC Acoustic Mixer/Plume Tests Rdg# V601

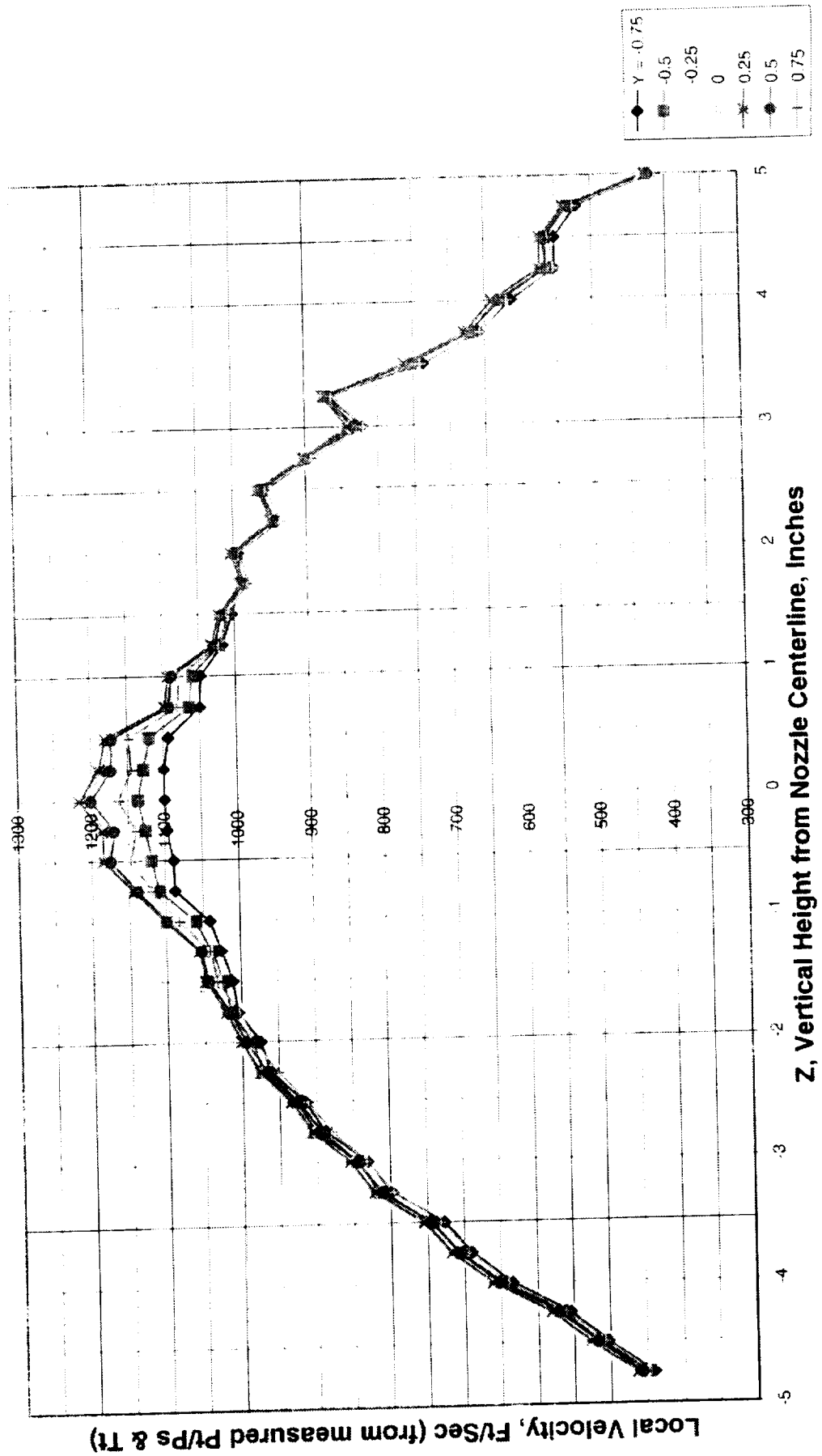


FIGURE 52

12L Baseline Mixer w/50% Nozzle Length Velocity Survey at $x/D=7.5$, 1.74 NPR)core, 1.82 NPR)fan, 0.2 Mn)FS, 2.79 Tt)core/Tt)fan, 1966 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # V602

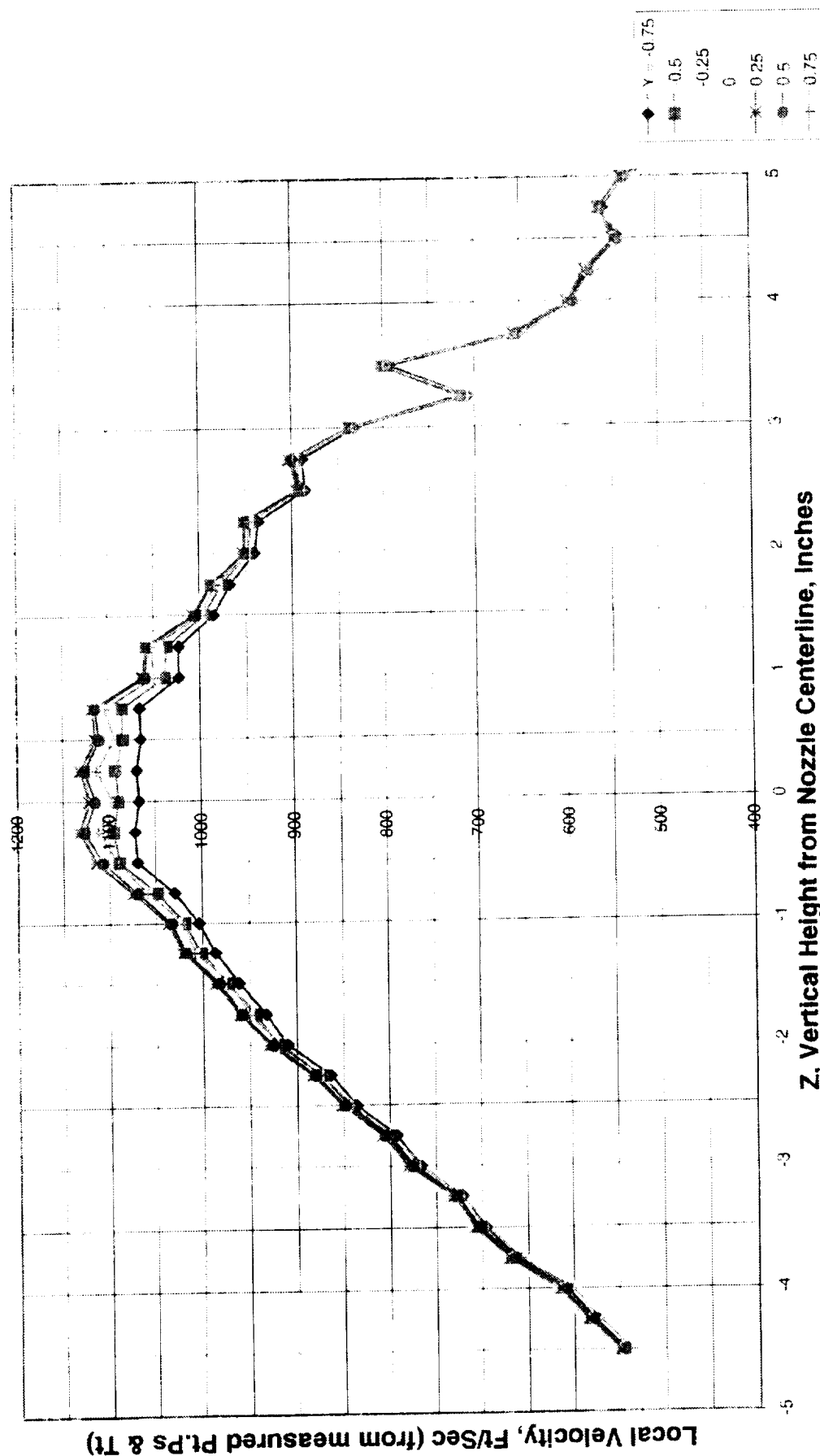
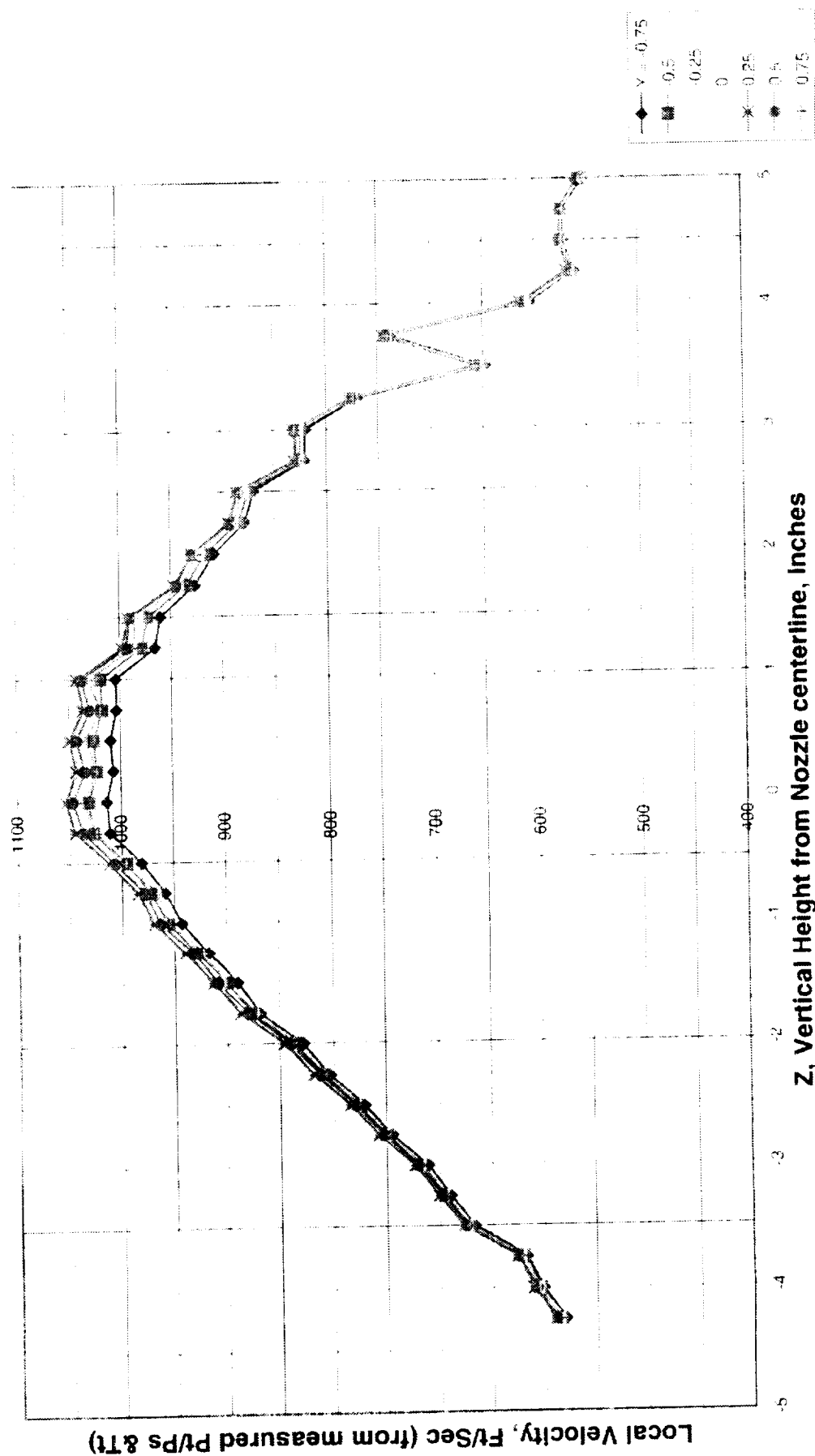


FIGURE 53

12L Baseline Mixer w/50% Nozzle Length Velocity Survey at $x/D=10.0$, 1.74 NPR)core, 1.82 NPR)fan, 0.2 Mn)FS, 2.79 Tt)core/Tt)fan, 1966 NASA-LeRC Acoustic Mixer/Plume Tests Rdg #V603



20L Deep Scalloped Mixer W/100% Nozzle Length - $x/D=0.5$, 1.74 NPR)core. 1.82 NPR)fan, 2.79
Tt)coreTt)fan, Rdg# V542 - 1996 NASA-LeRC Acoustic Mixer/Plume Test

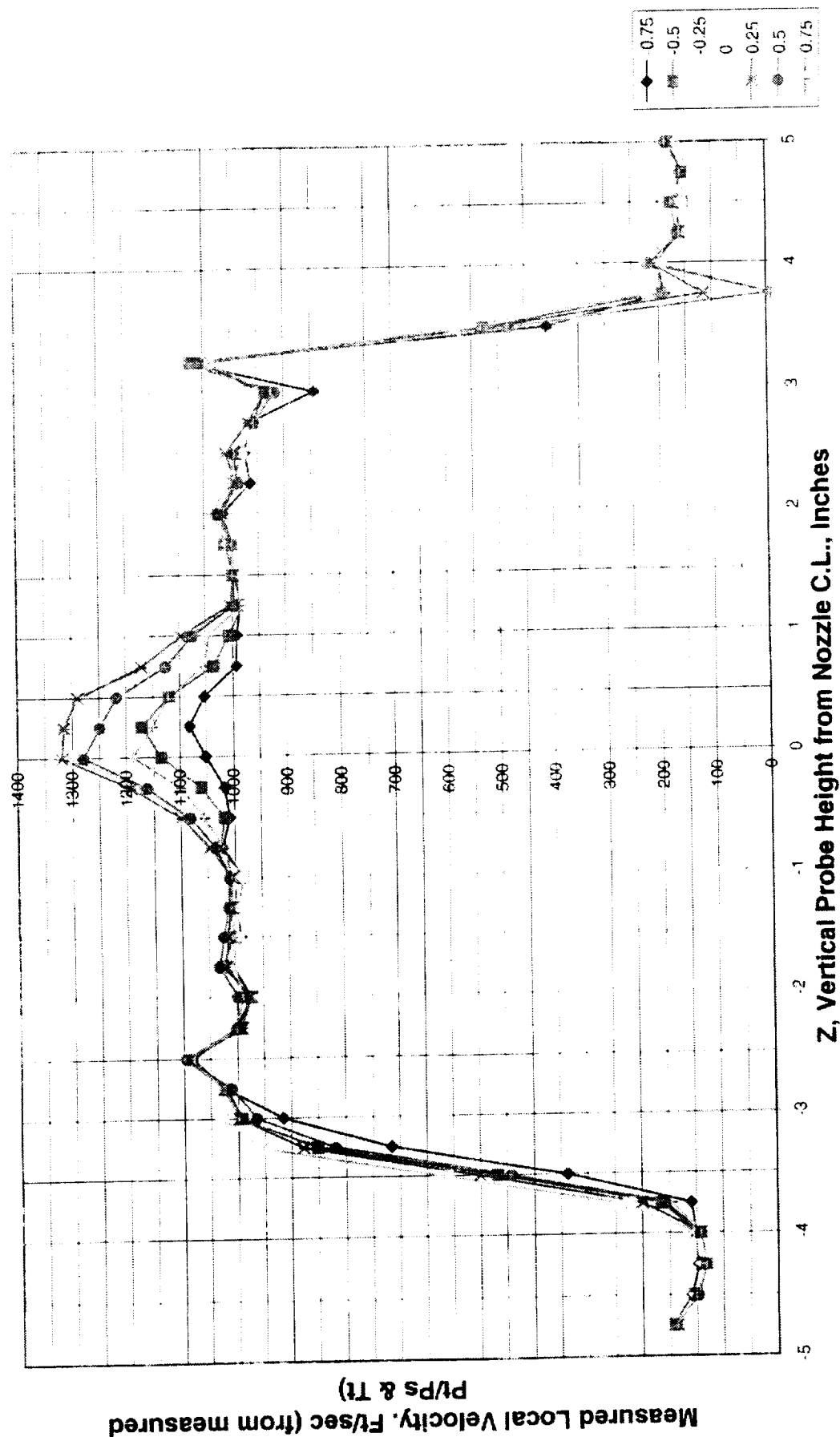


FIGURE 54

Figure 55(a). Velocity Profile at $x/D=1.0$, 20L Deep Scalloped Mixer (20DH) w/100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan 2.79 Tt)core(Tt)fan, Rdg# V541 - 1996 NASA-LeRC
Acoustic Mixer/Plume Test

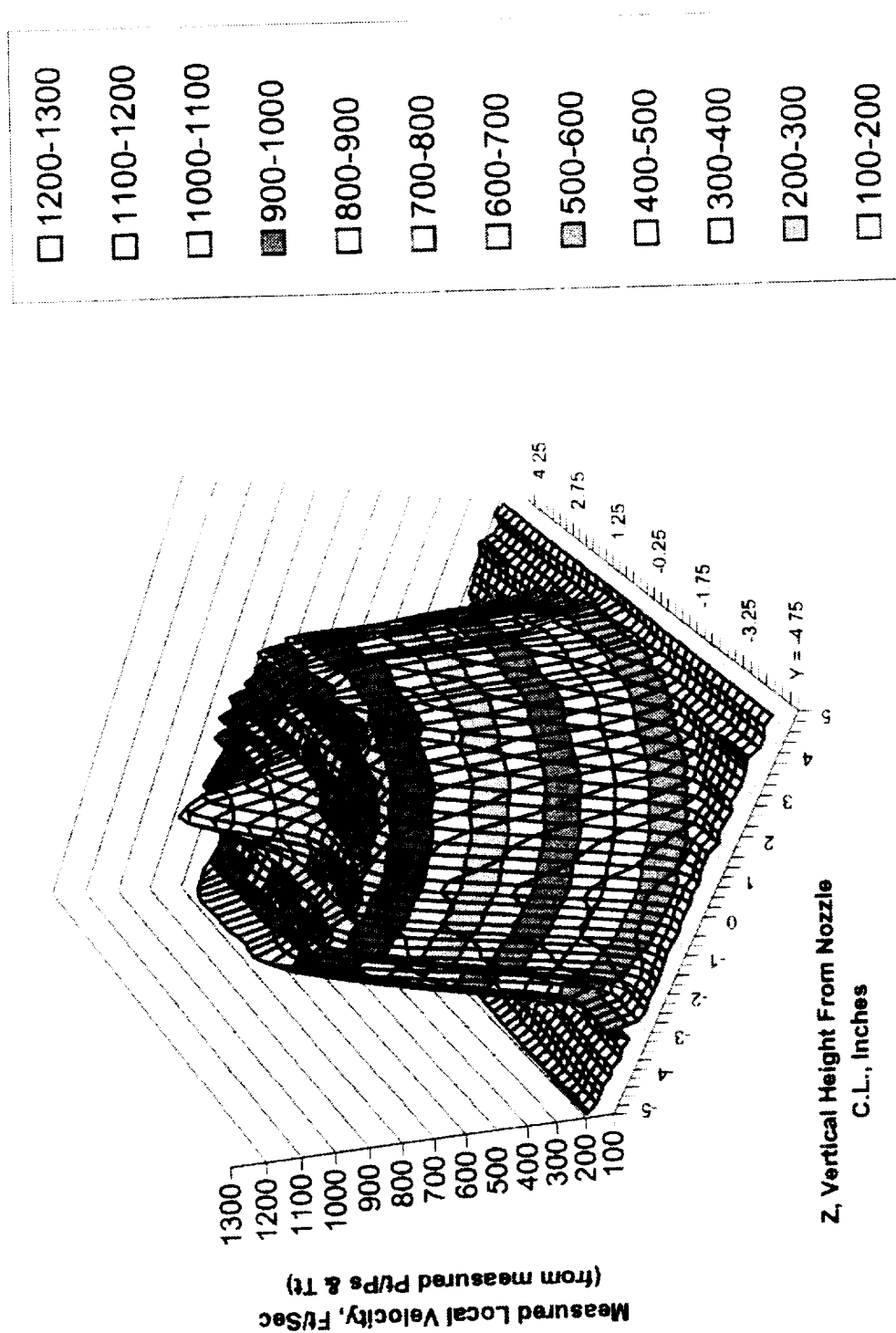


FIGURE 55 (b)

Velocity Profile at $x/D=1.0$, 20L Deep Scalloped Mixer w/100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan 2.79 Tt)core/Tt)fan, Rdg# V541 - 1996 NASA-LeRC Acoustic Mixer/Plume Test

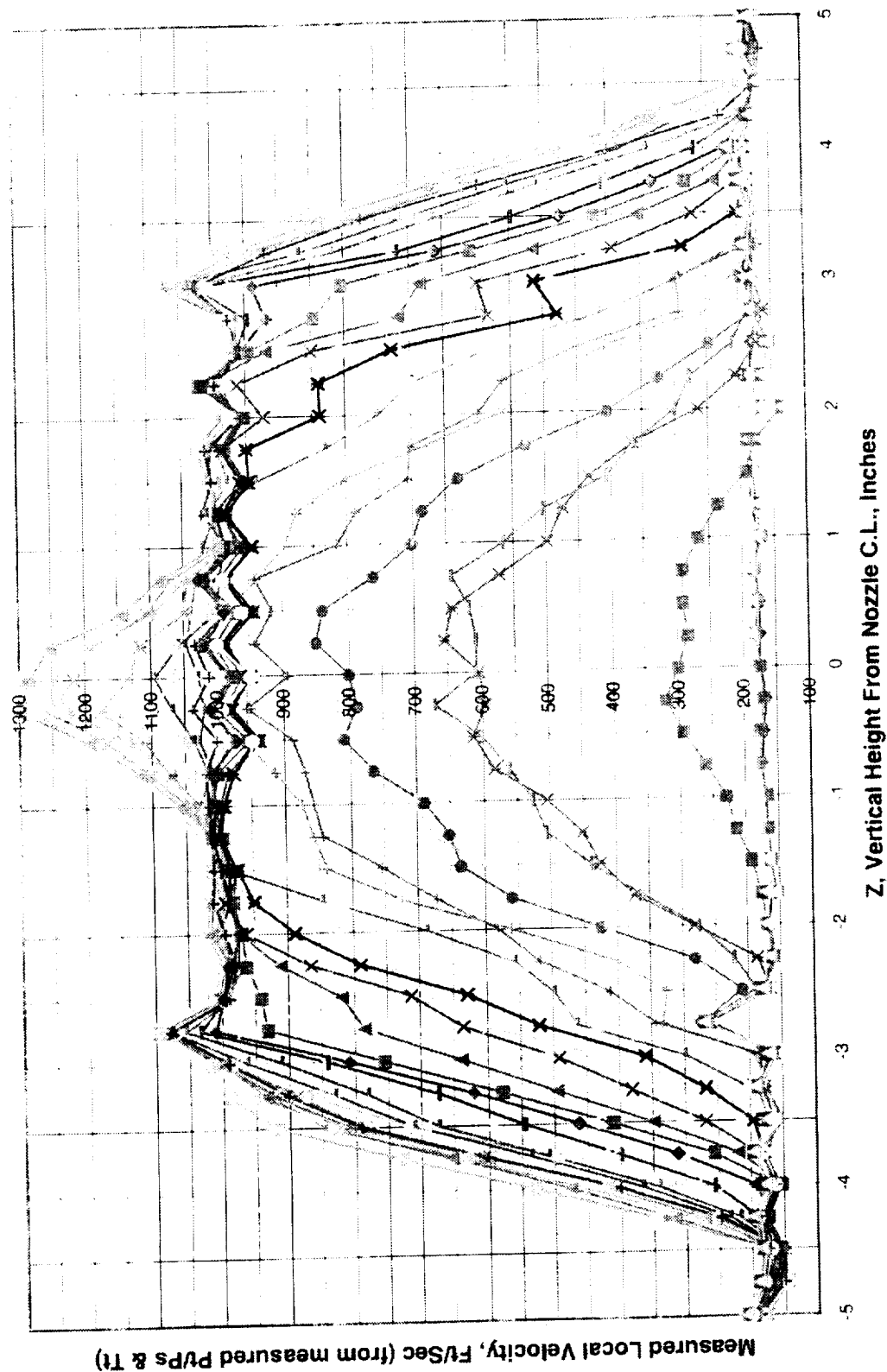


FIGURE 56

Velocity Profile at $x/D=3.0$, 20L Deep Scalloped Mixer w/100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, Rdg# V543 - 1996 Nasa-LeRC Acoustic Mixer/Plume Test

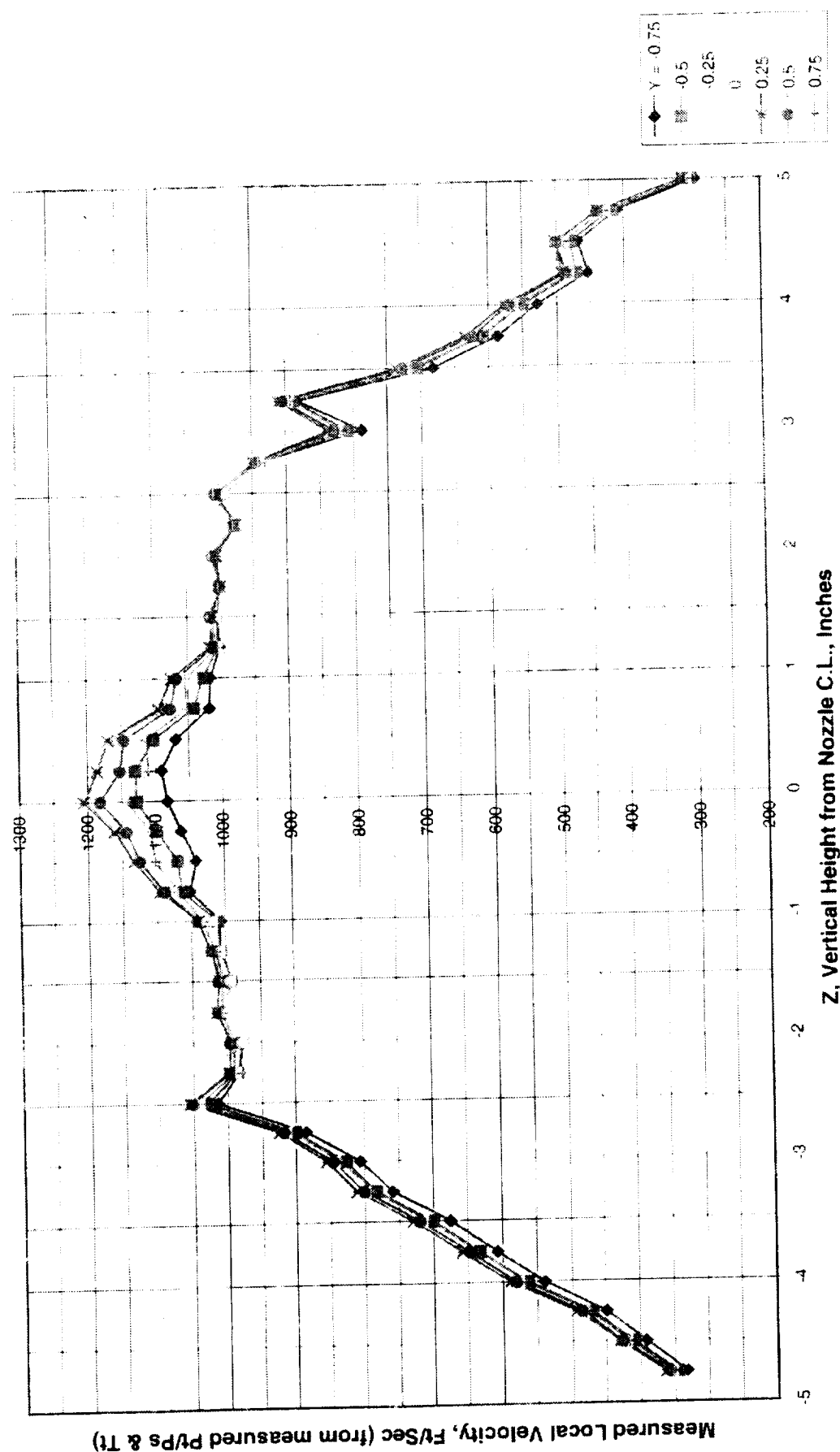


FIGURE 57

Velocity Profile at $x/D=5.0$, 20L Deep Scalloped Mixer w/100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Rt)core/Tt)fan, Rdg# V544 - 1996 NASA-LeRC Acoustic Mixer/Plume Test

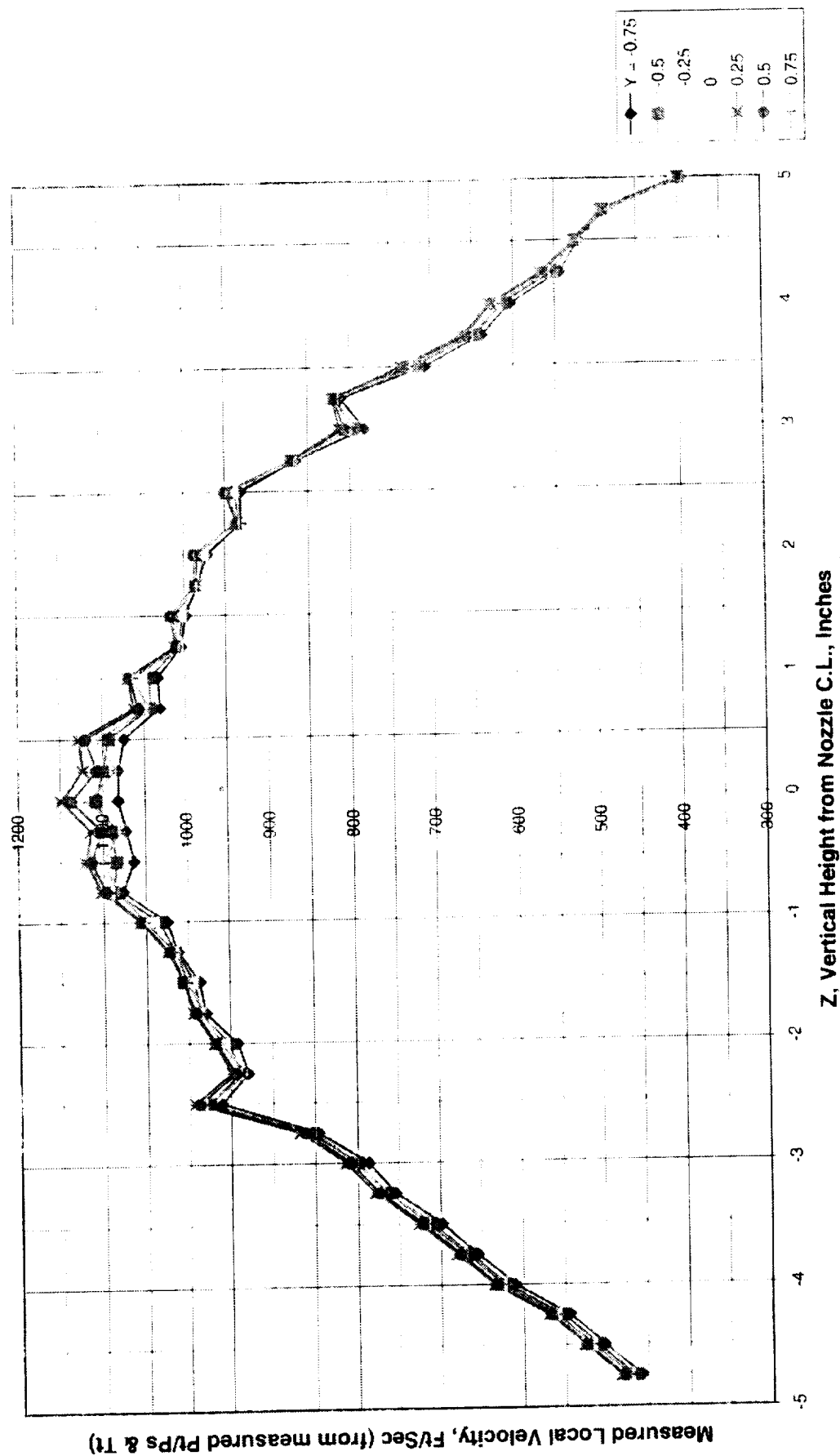


FIGURE 58

Velocity Profile at $x/D=7.5$, 20L Deep Scalloped Mixer w/100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, Rdg# V545 - 1996 NASA - LeRC Acoustic Mixer/Plume Test

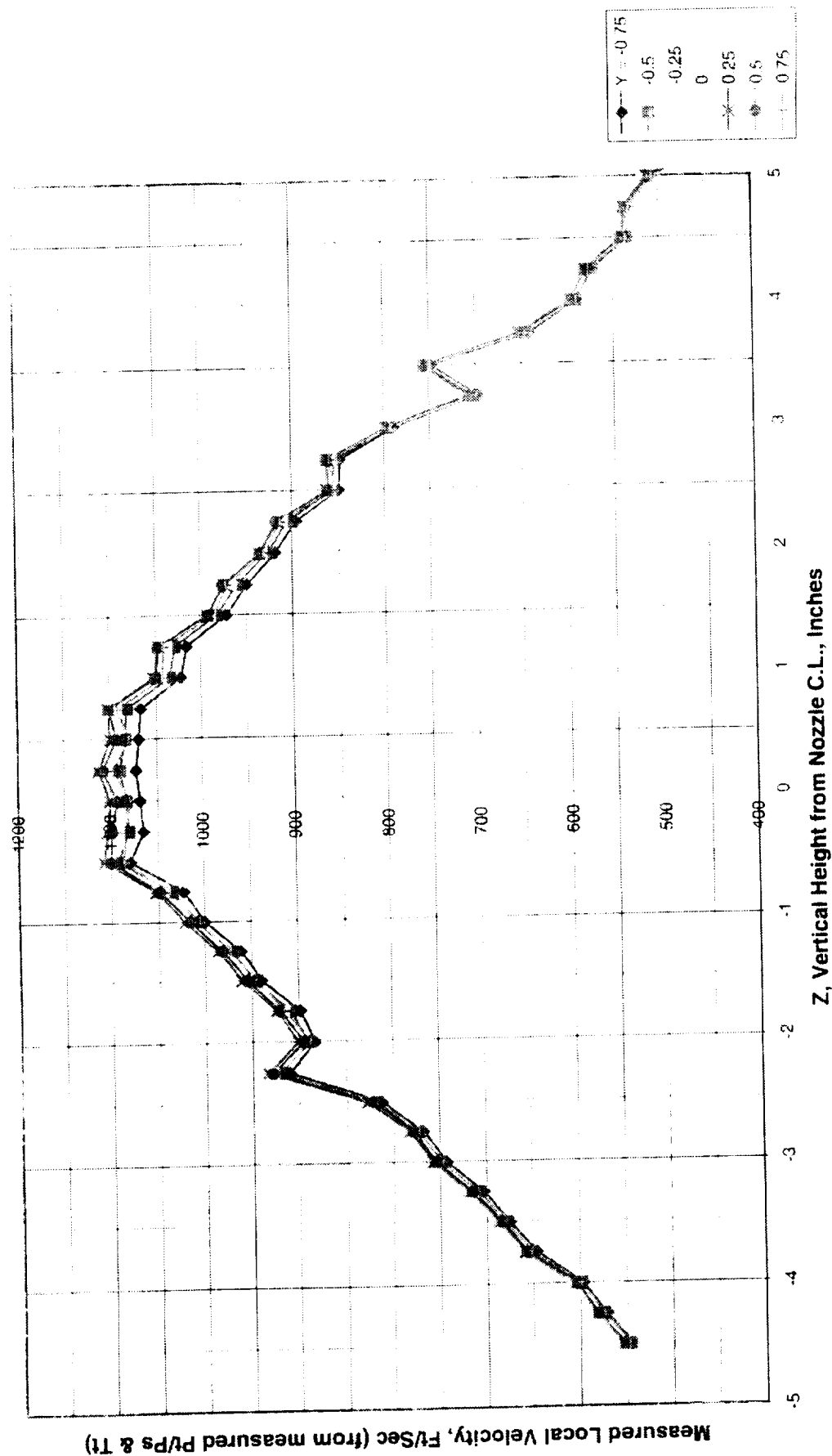


FIGURE 59

Velocity Profile at $x/D=10$, 20L Deep Scalloped Mixer w/100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, Rdg# V546 - 1996 NASA-LeRC Acoustic Mixer/Plume Test

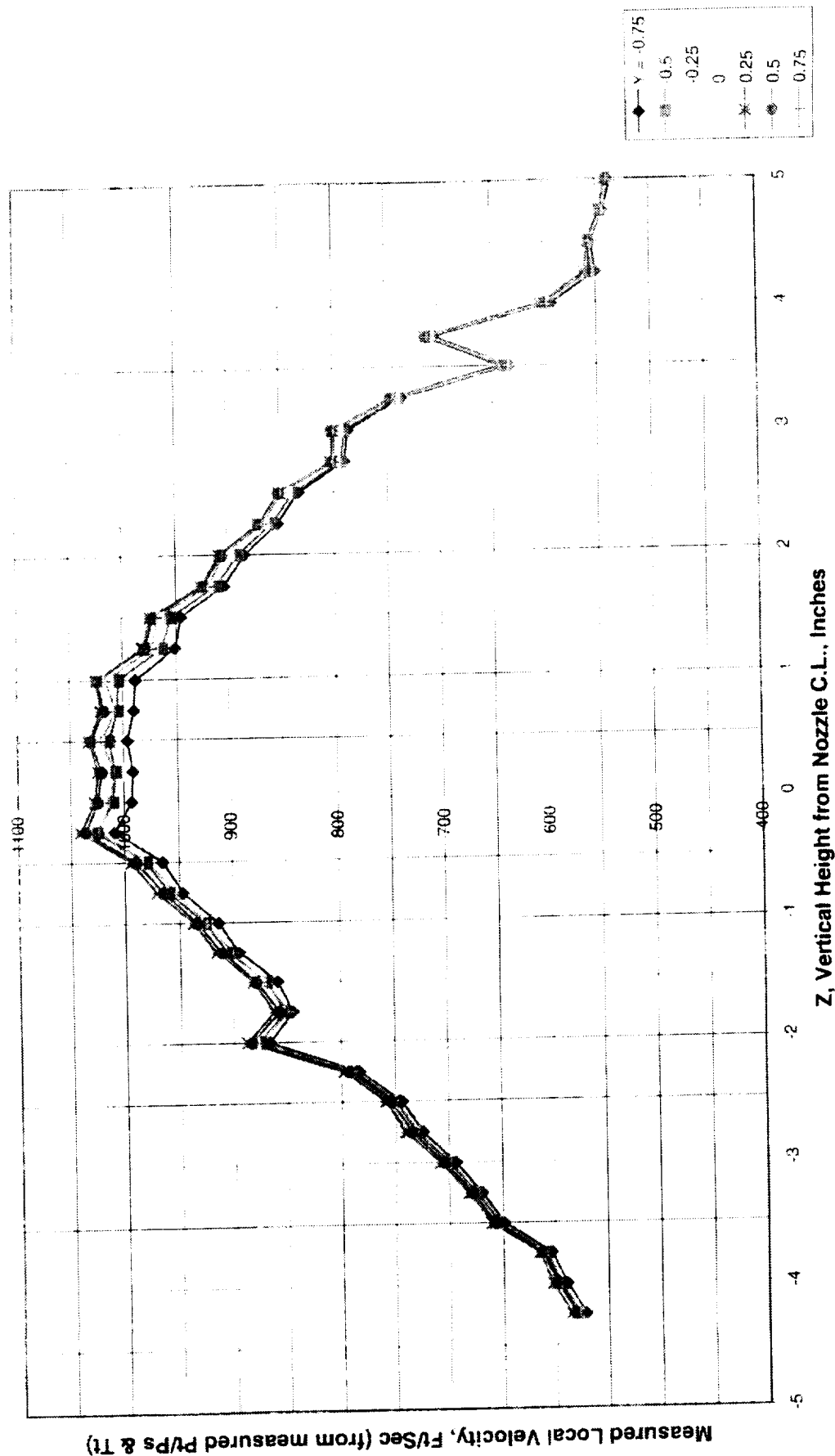


Figure 60. JET WAKE DIAGRAM
20L Deep Mixer, NPR)core=1.39, NPR)fan=1.44, Tt)core/Tt)fan=2.34, 0.2 Mn)FS,
Rdg #s V552 to V557 - 1996 NASA-LeRC Acoustic Mixer/Plume Tests

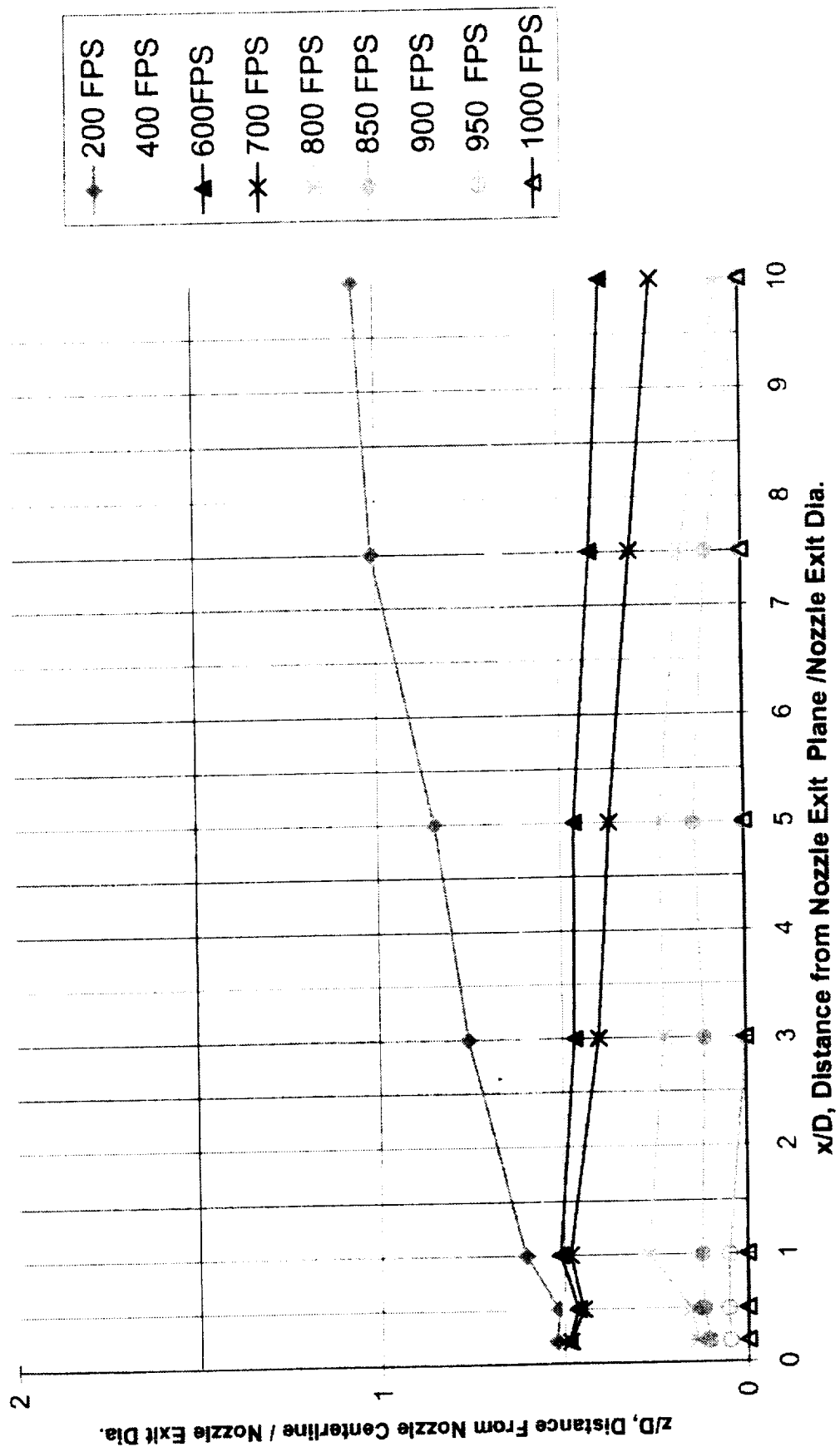
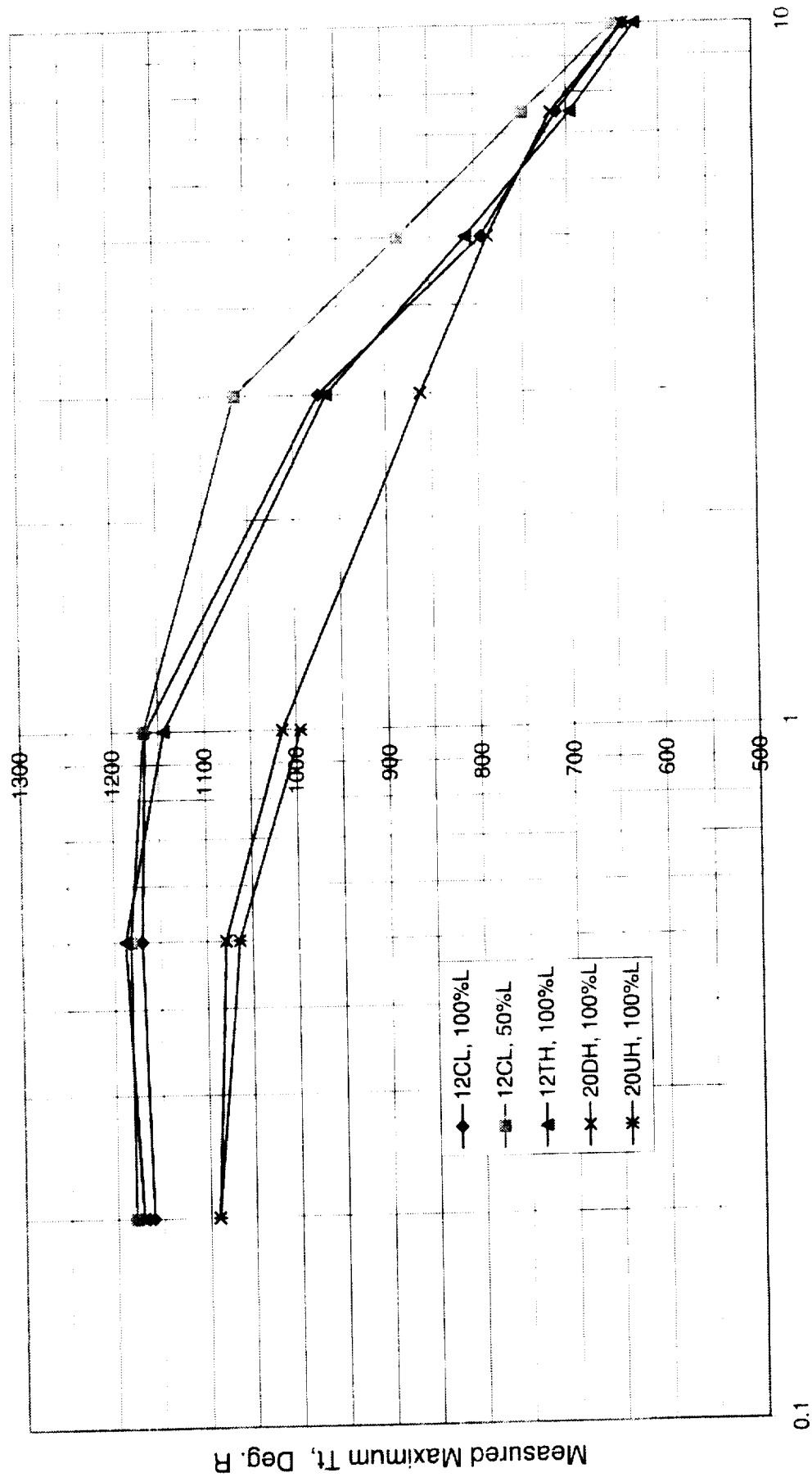


Figure 61. Maximum "Centerline" Total Temperature Decay - 1996 Nasa-LeRC Acoustic Mixer
Plume Tests - NPR)core=1.39, NPR)fan=1.44, Tt)core/Tt)fan=2.34, Mn)FS=0.2



x/D, Axial Distance From Nozzle Exit Plane / Nozzle Exit Diameter

FIGURE 62

Maximum "Centerline" Total Temperature Decay, 20L Deep Mixer, 100% Nozzle Length, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt(core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg #'s TT560, TT559, TT561, TT558, TT549, TT548, TT547

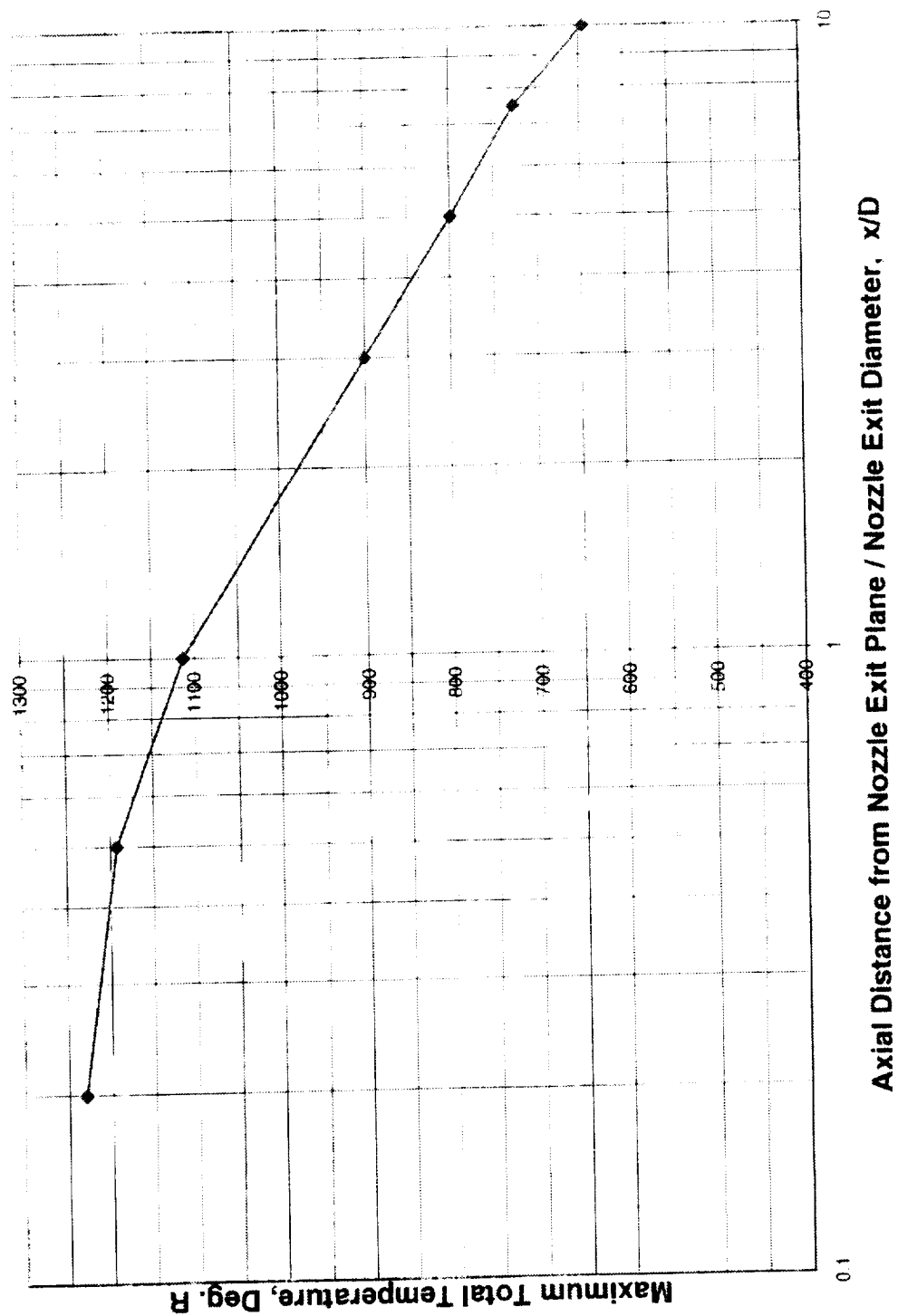


FIGURE 63 (a)

Figure 63(a). Zoom in for 20L Deep Mixer (20DH) Tt Survey at $x/D=0.2$. NPR)core=1.39, NPR)fan=1.44.
Tt)core/Tt)fan=2.34, Mn)FS=0.2; 1996 NASA-LeRC Acoustic Mixer/Plume Test, Rdg# TT550 [Highest Tt at center =
1085.3 deg. R]

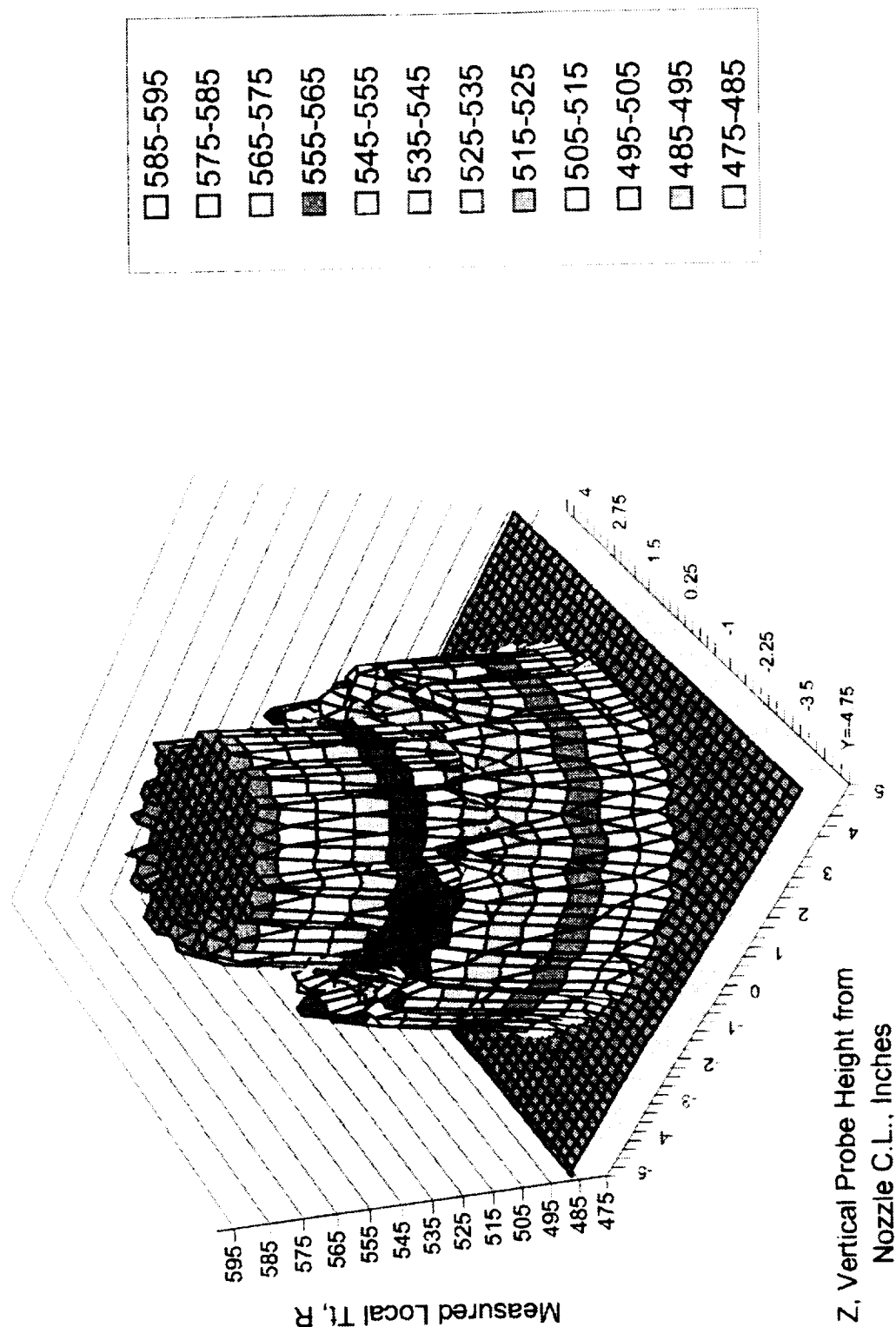
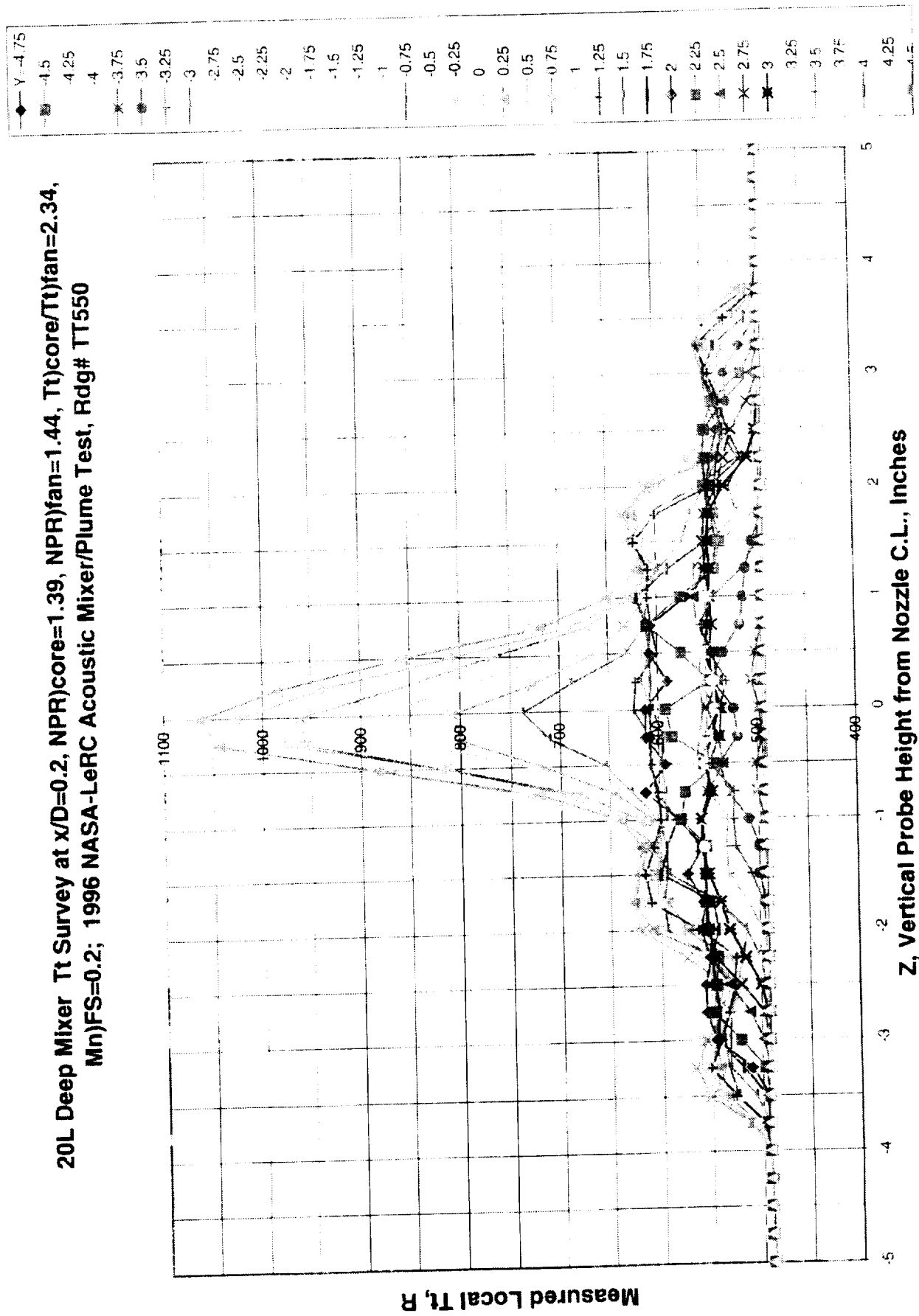
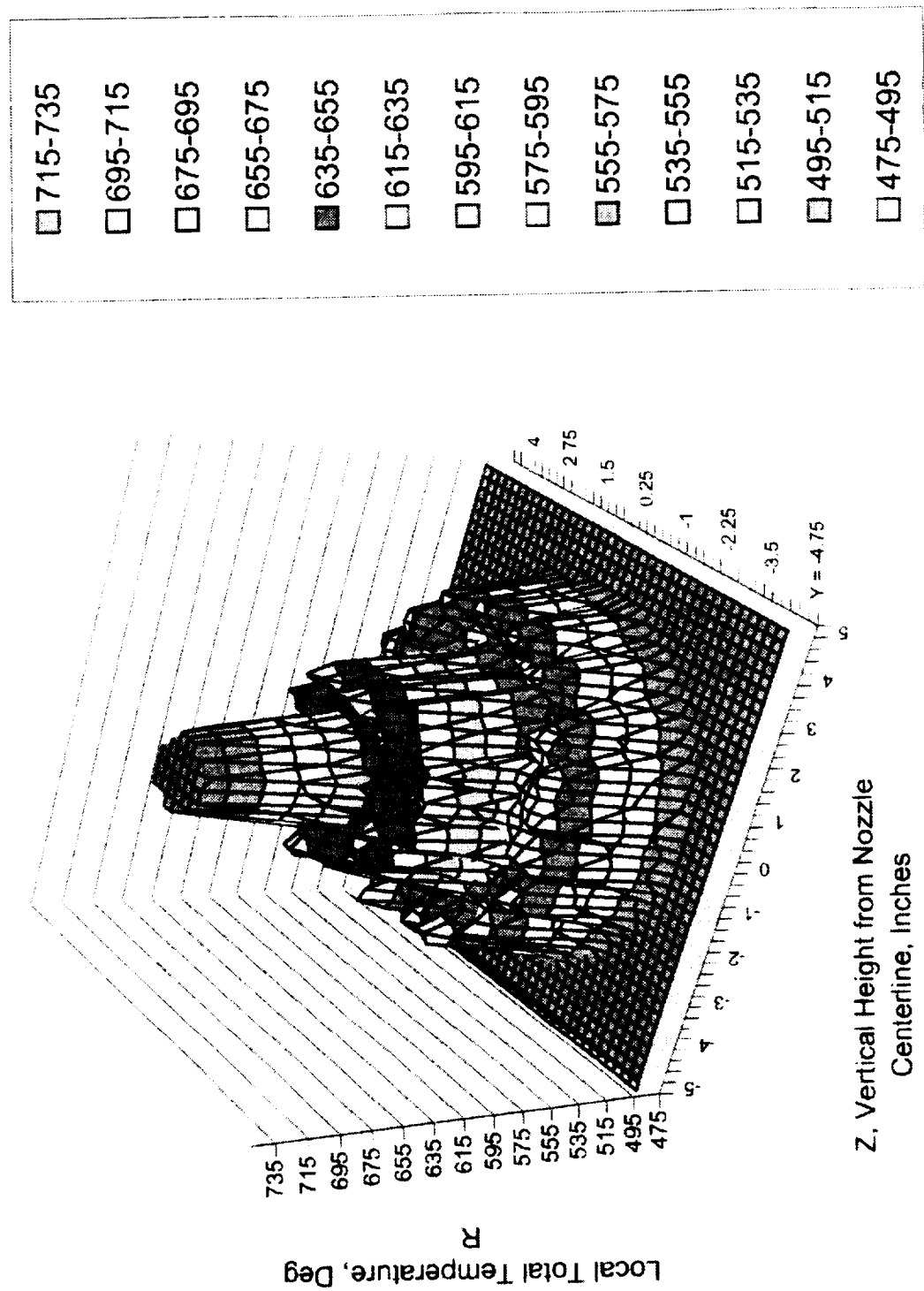


FIGURE 63 (b)

20L Deep Mixer Tt Survey at $x/D=0.2$, NPR)core=1.39, NPR)fan=1.44, Tt)core/Tt)fan=2.34,
Mn)FS=0.2; 1996 NASA-LeRC Acoustic Mixer/Plume Test, Rdg# TT550



TT560 [Max. Tt = 1230.4 deg R]



20L Deep Mixer, Total Temperature Survey at $x/D=0.2$, 1.54 NPR)core, 1.61 NPR)fan, 2.62Tt)core/Tt)fan, o.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # TT560

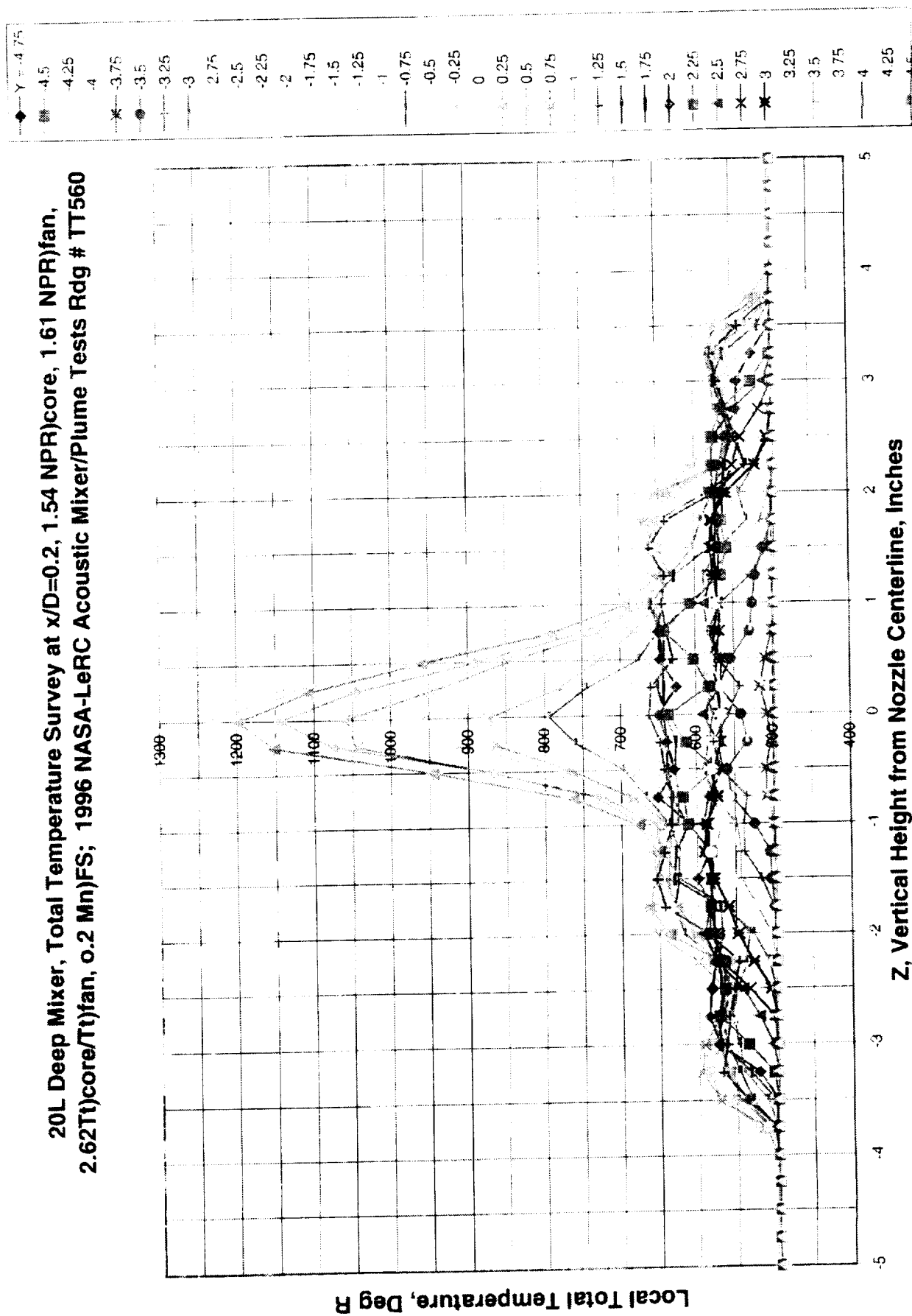


FIGURE 65

Internal Tongue Mixer - Tt survey at $x/D=0.2$, NPR)core=1.54, NPR)fan=1.61, Mn)FS=0.2, NASA
LeRC 1996 Acoustic Mixer/Plume Tests, Rdg # TT510

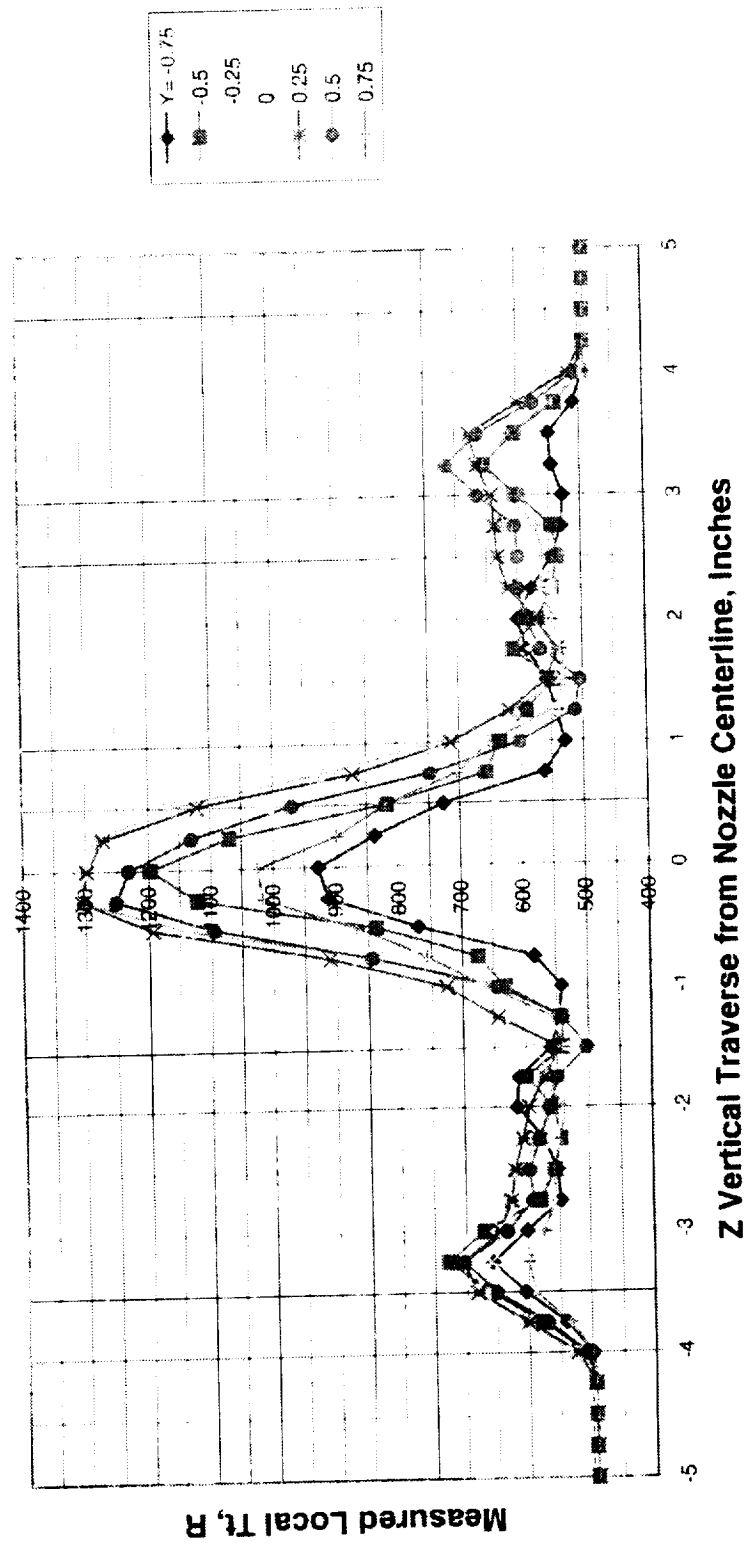


Figure 66(a). 20L Deep Mixer (20DH), Total Temperature Survey at $x/D=0.2$, 1.54 NPR)core, 1.61 NPR)fan, 2.62Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # TT560 [Max. $T_t=1230.4$ degR]

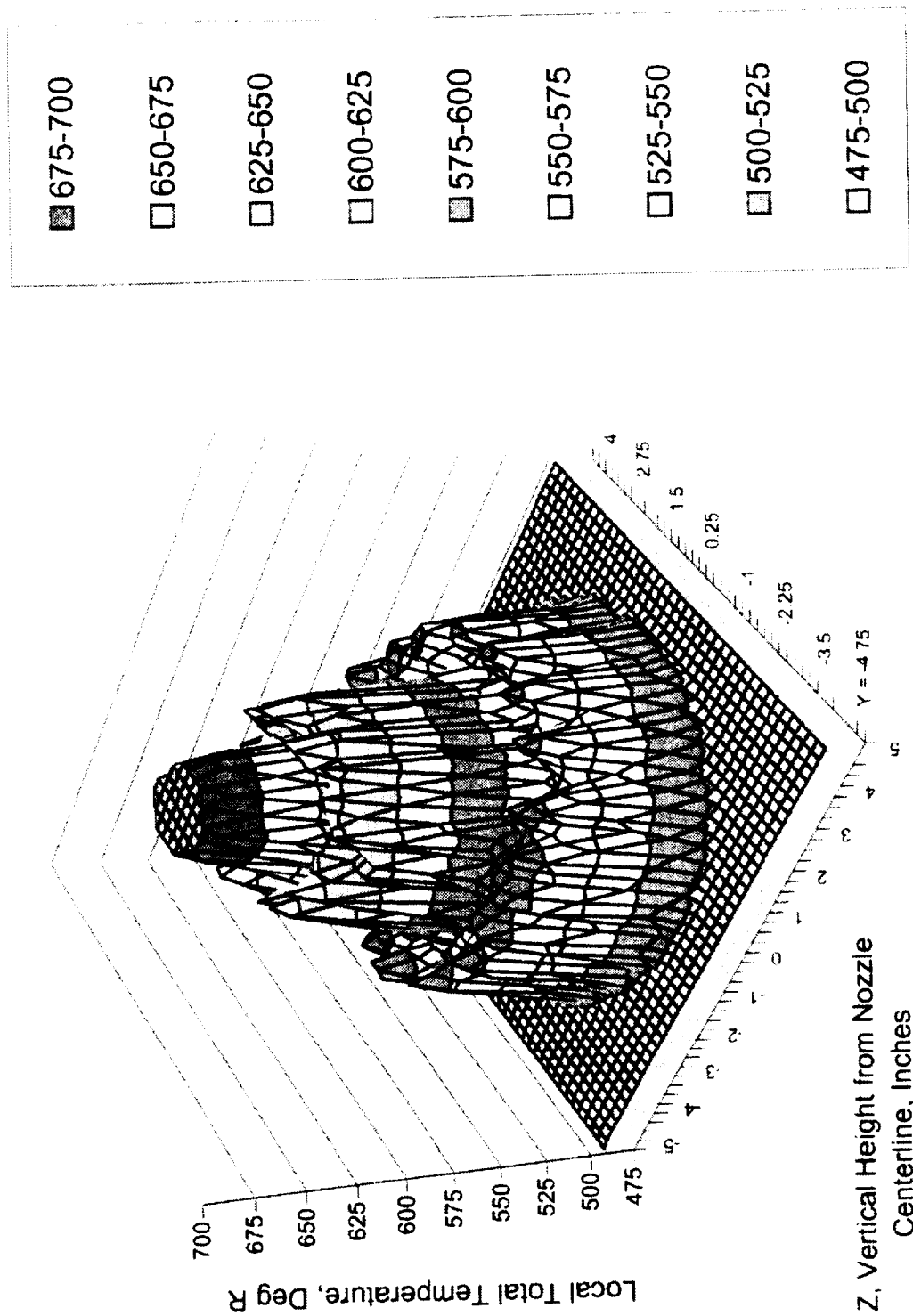


FIGURE 66(b)

20L Deep Mixer, Total Temperature Survey at $x/D=0.2$, 1.54 NPR)core, 1.61 NPR)fan,
2.62Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # TT560

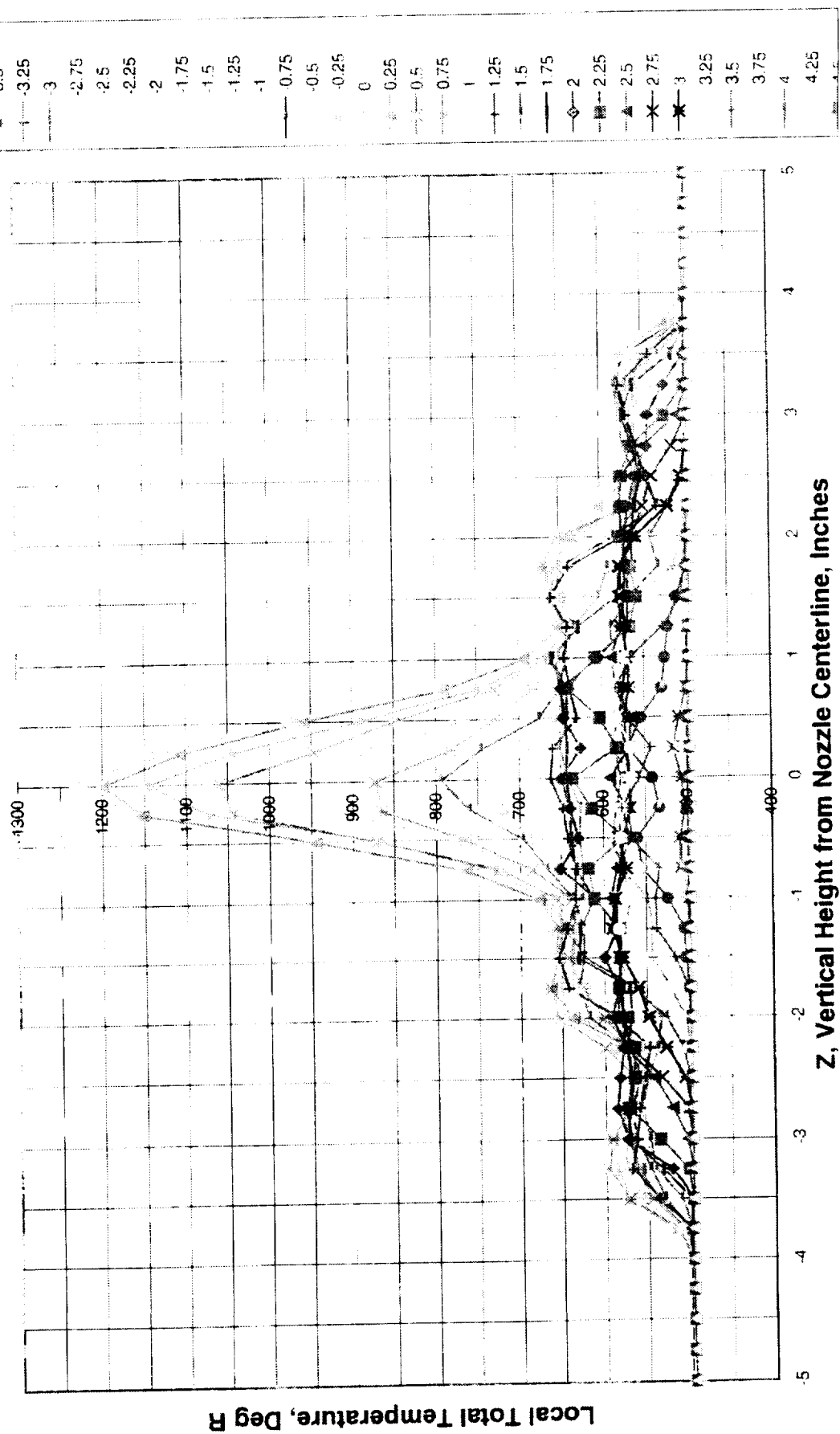


FIGURE 67

20L Deep Mixer, 100% Nozzle Length, Tt Survey at $x/D=0.5$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # TT559

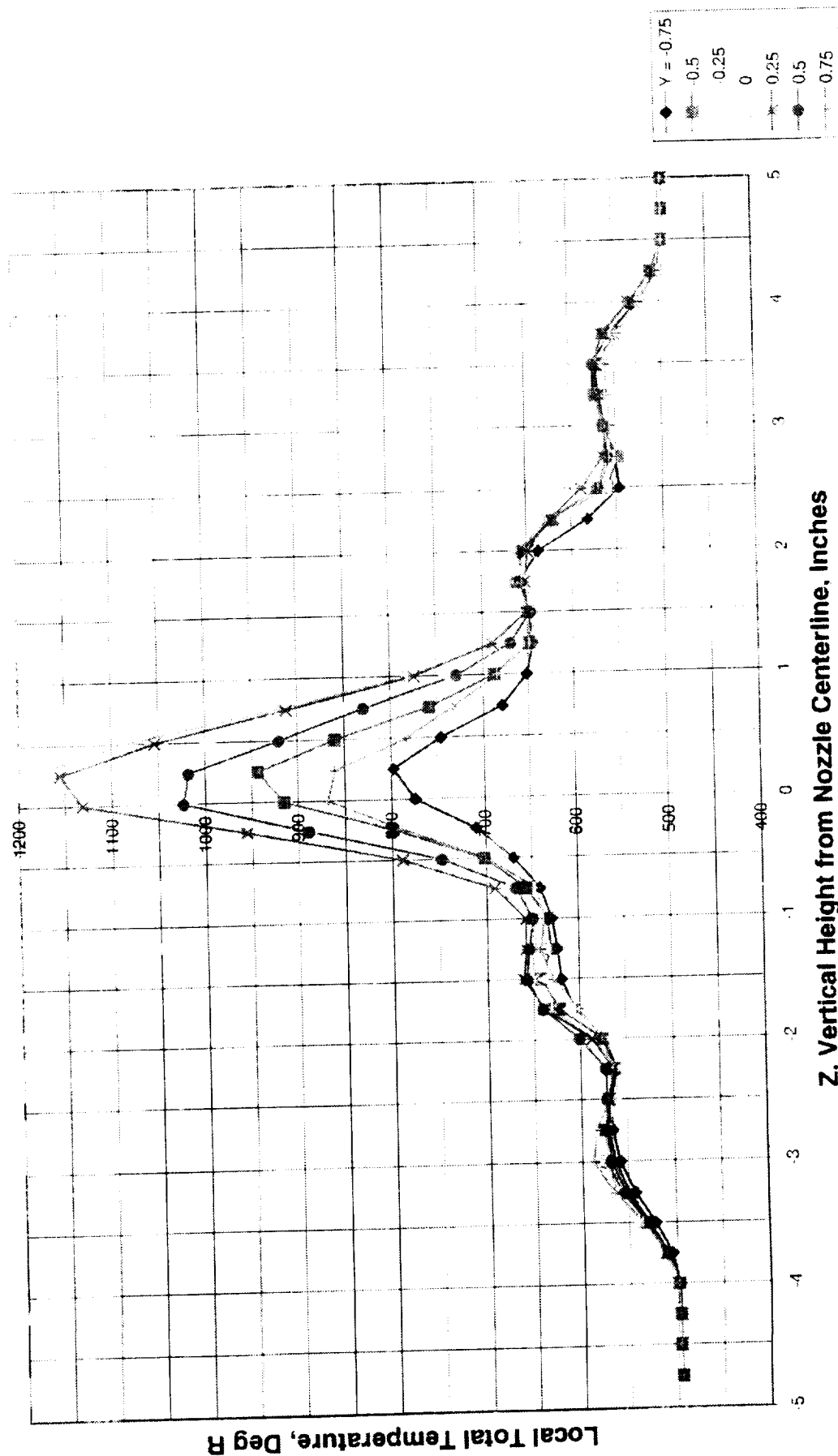


Figure 68(a). 20L Deep Mixer (20DH), 100% Nozzle Length, Tt Survey at $x/D=1.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # TT561

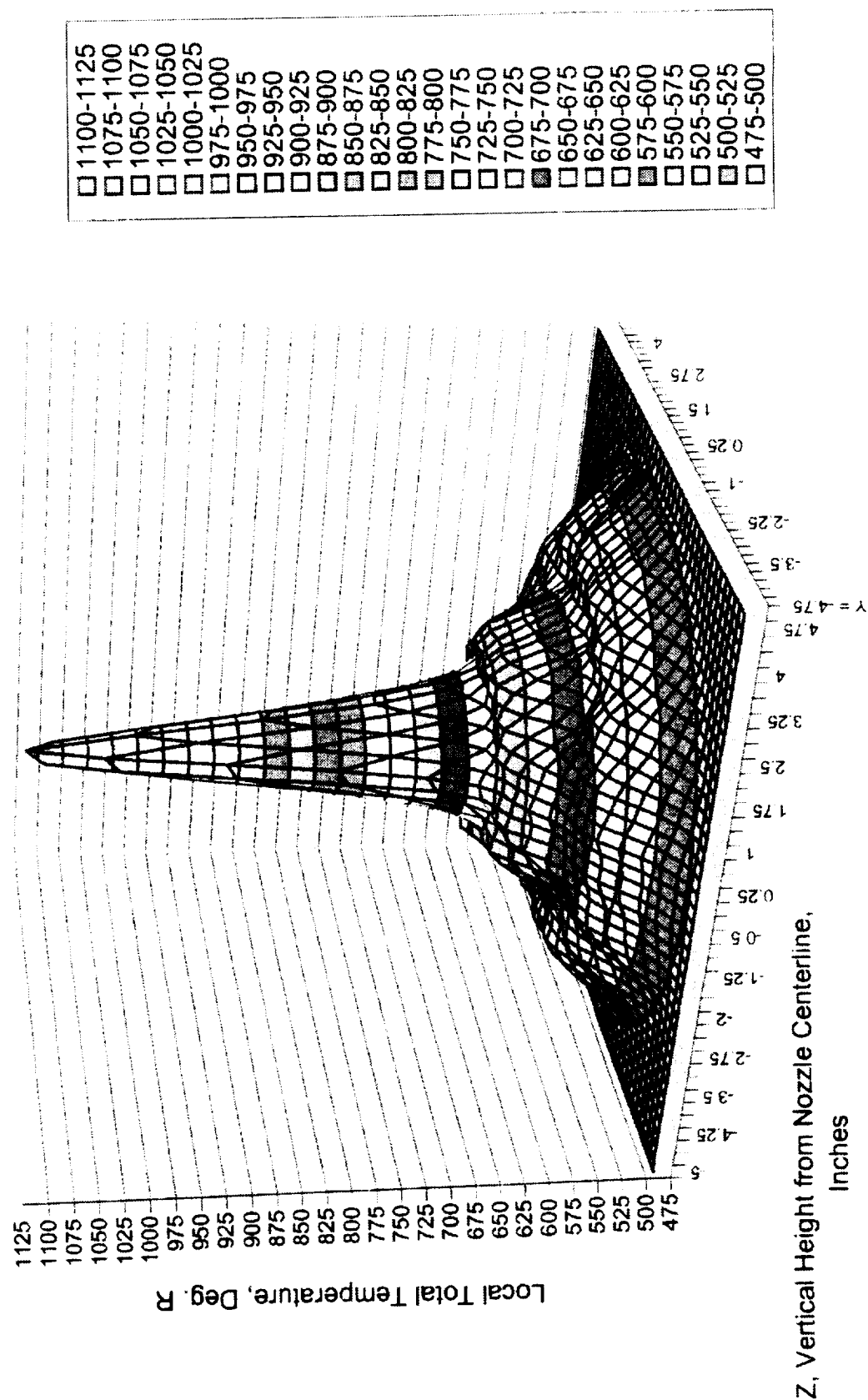


FIGURE 68(b)

20L Deep Mixer, 100% Nozzle Length, Tt Survey at $x/D=1.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # TT561

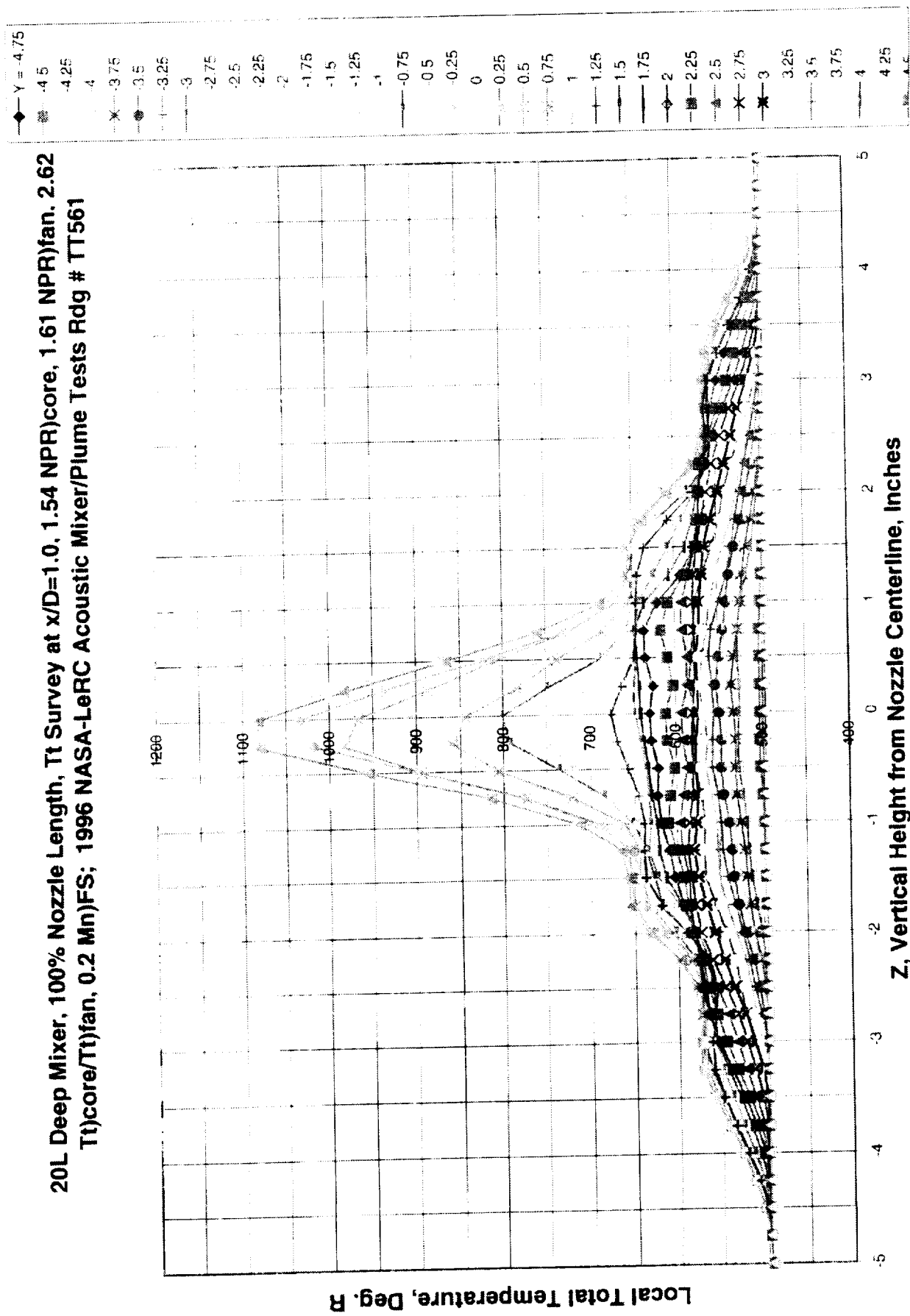


FIGURE 69

20L Deep Mixer, 100% Nozzle Length, Tt Survey at $x/D=3.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Test Rdg# TT558

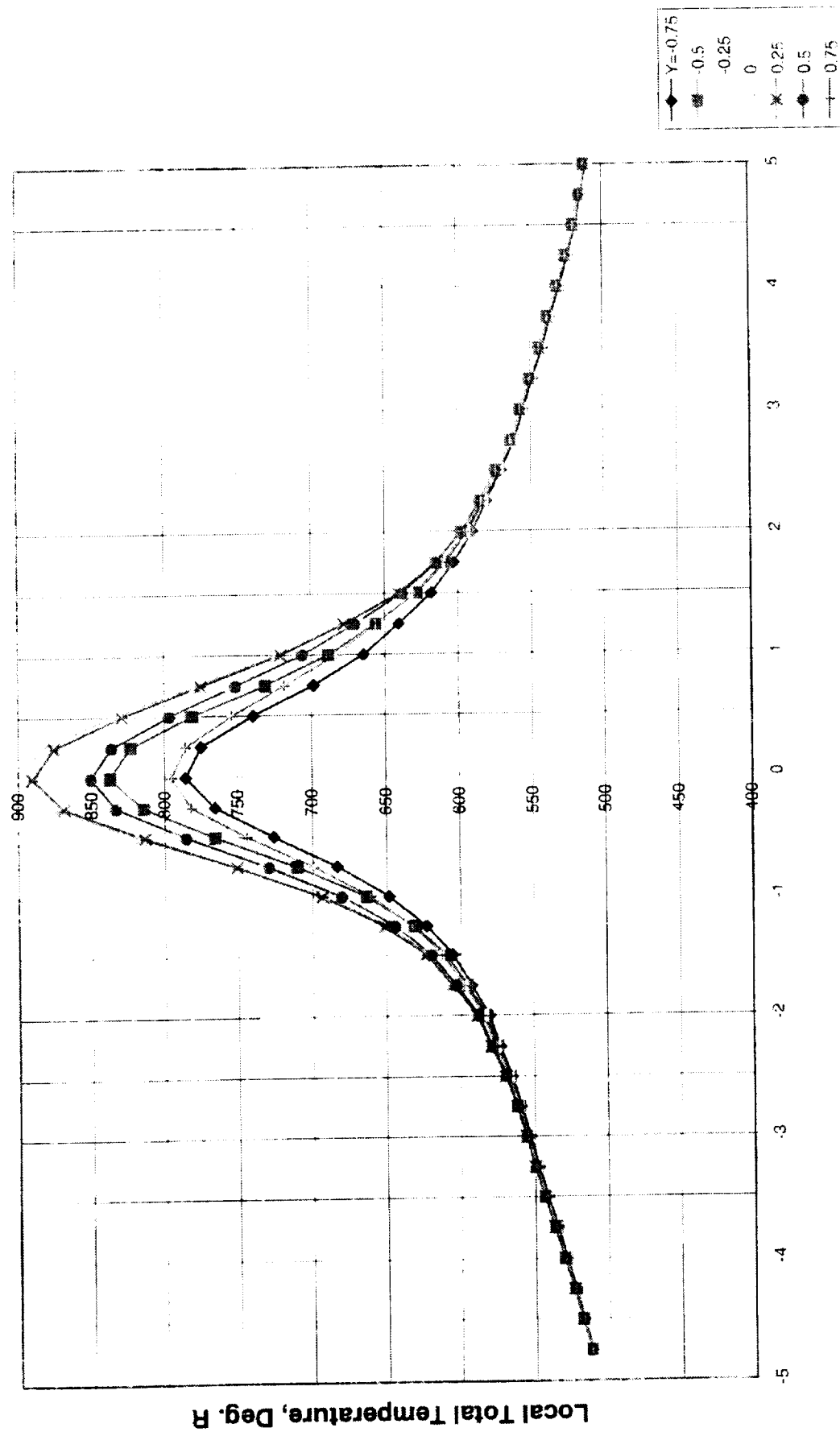


FIGURE 70

20L Deep Mixer, 100% Nozzle Length, Tt Survey at $x/D=5.0$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # TT549

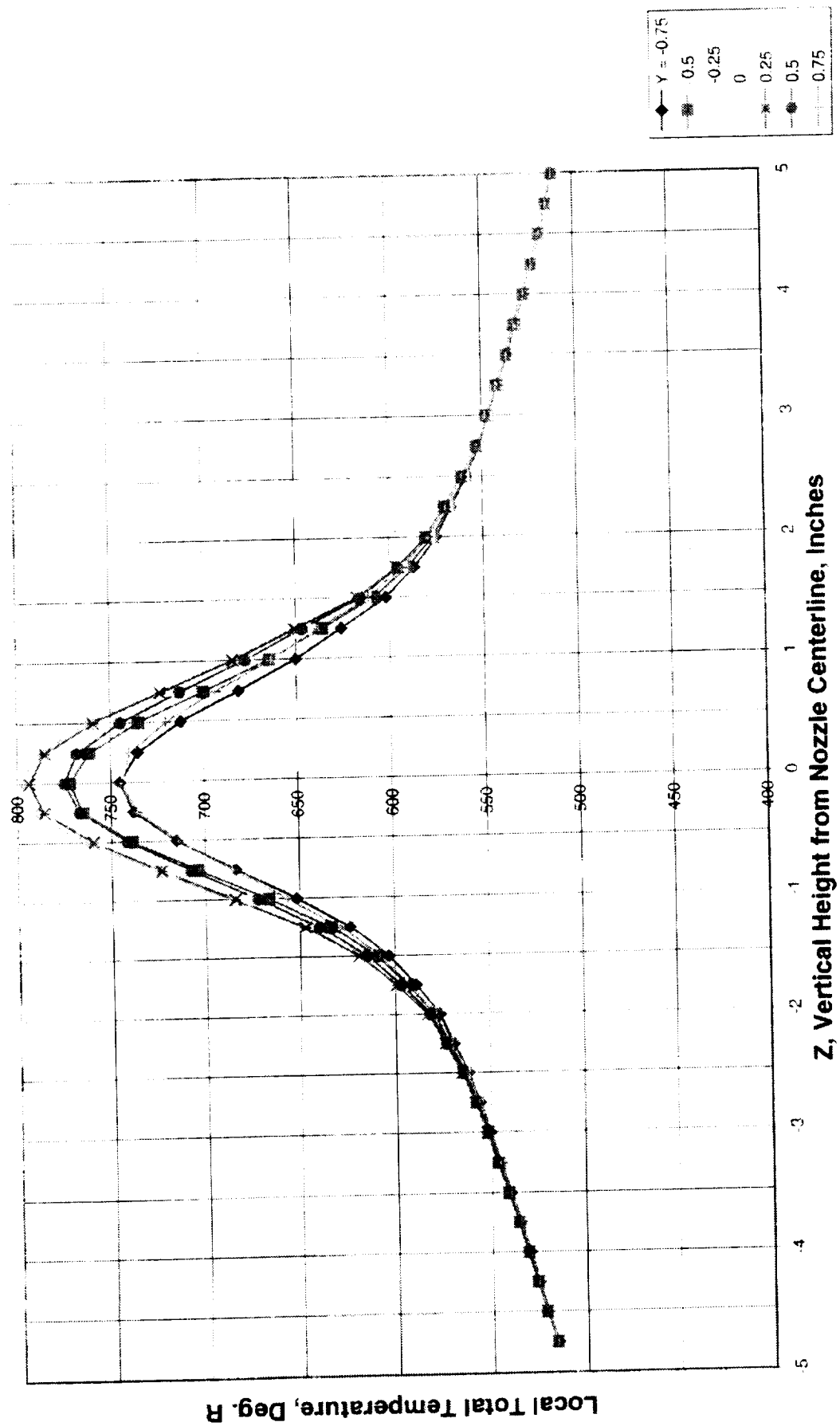


FIGURE 71

20L Deep Mixer, 100% Nozzle Length, Tt Survey at $x/D=7.5$, 1.54 NPR)core, 1.61 NPR)fan, 2.62
Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # TT548

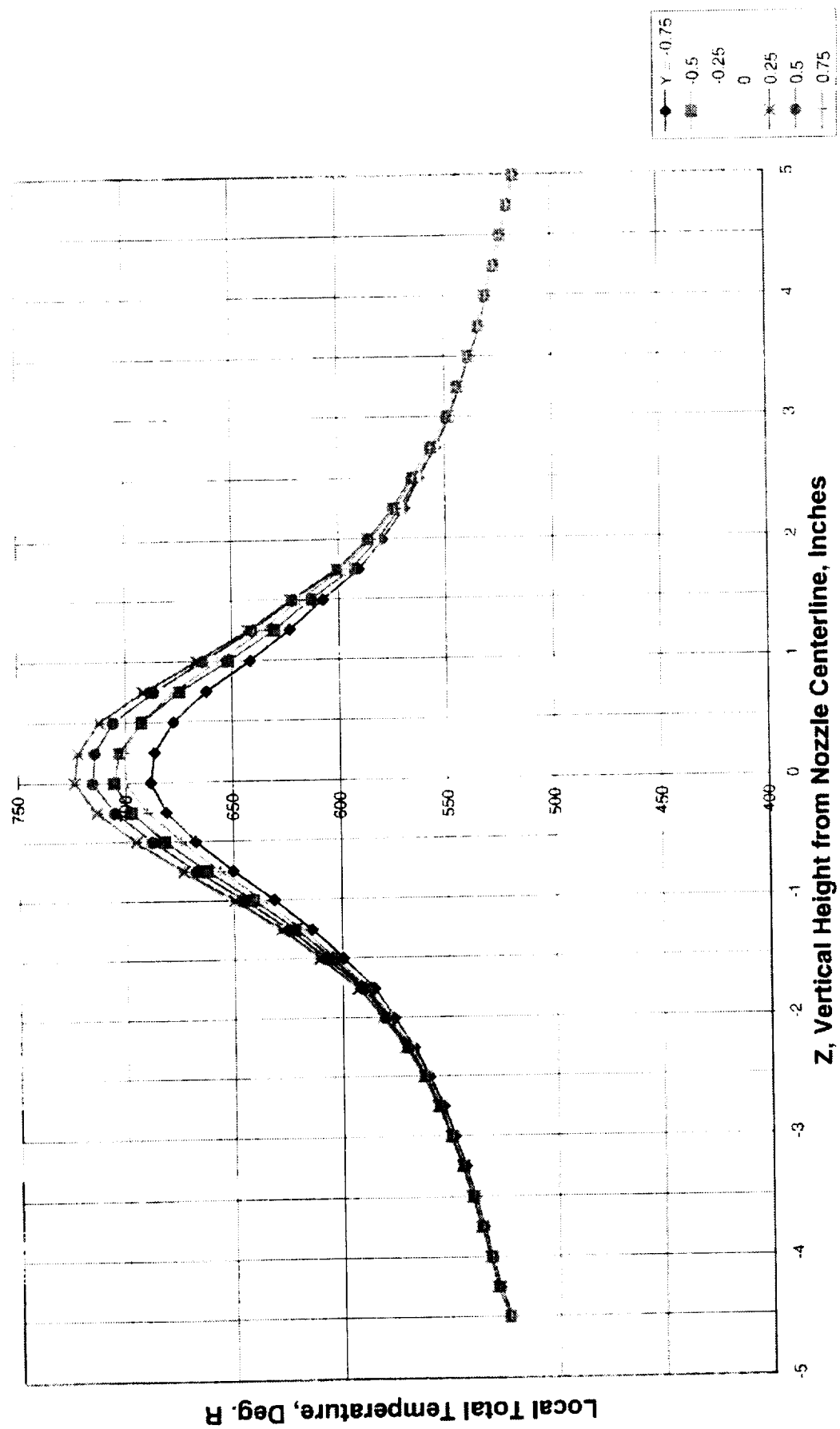
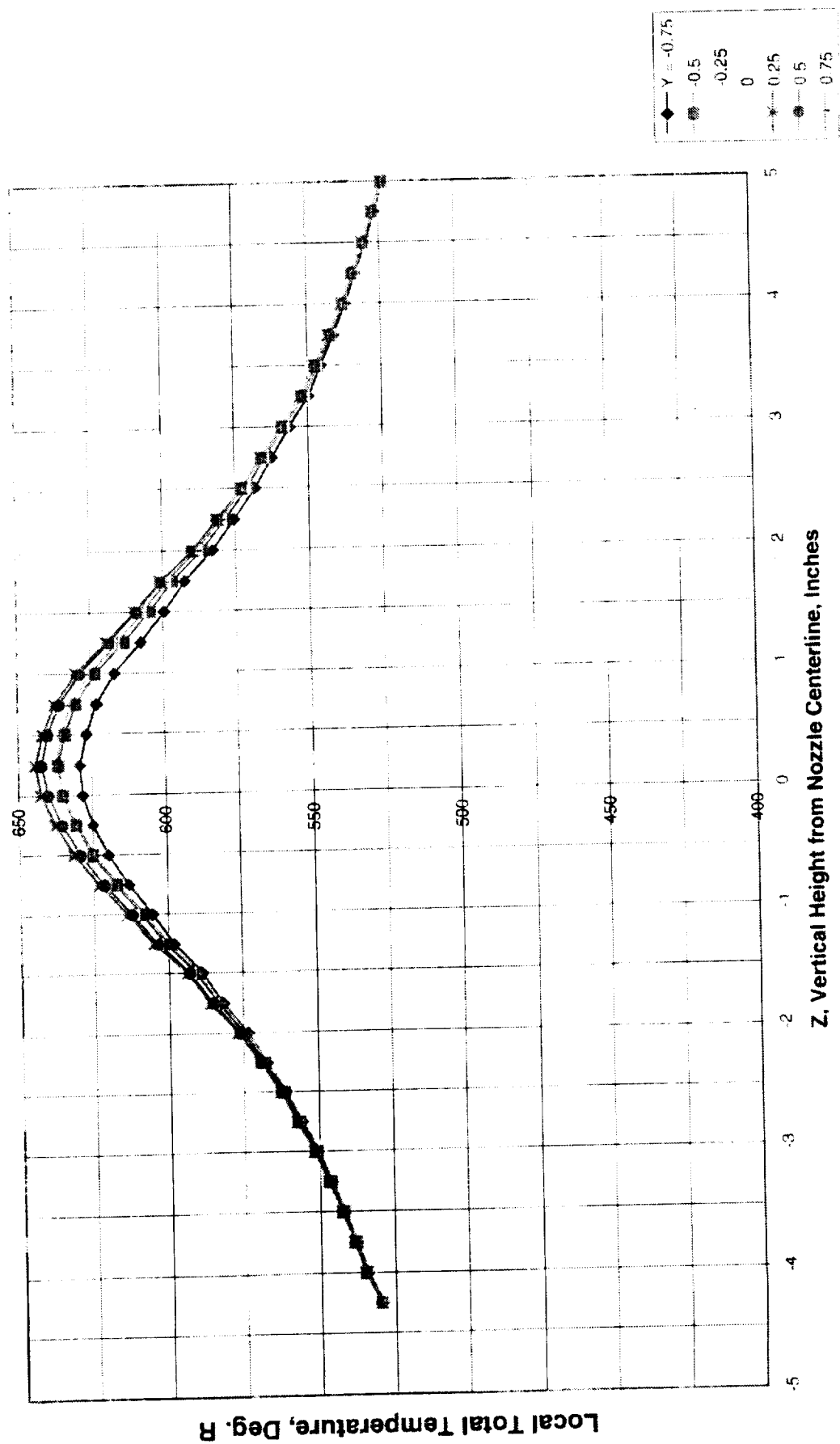


FIGURE 72

20L Deep Mixer, 100% Nozzle Length, Tt Survey at $x/D=10$, 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # TT547



Part 2
Additional Plume Survey Data

Von D. Baker

SUMMARY

The purpose of this part is to present the second phase of the additional plume data analysis which included: (1) non-dimensional plume total temperature and velocity comparisons, (2) selected total temperature color contour plots, and (3) comparisons of the earlier 1995 mixer plume temperature data with the 1996-97 plume temperature data.

The data, with pertinent comments, are presented in the following order:

1. Non-dimensional total temperature and velocity comparisons
 - 1.1 Maximum "centerline" Tt / ideal mixed Tt for all mixers
 - 1.2 Maximum "centerline" velocity/ideal mixed velocity
 - 1.3 "η" temperature parameter for selected mixers at x/D=0.2
 - 1.4 "η" temperature parameter versus fan NPR at x/D=0.5
2. Total temperature comparisons from 1995 mixer plume tests
2. Total temperature contour plots for selected mixers and test conditions
 - 3.1 Contour plots for selected mixers from 1996-97 plume tests
 - 3.2 Contour plots for selected mixers from 1995 plume tests
4. Conclusions

For the 1995 tests described in section 2.0, the rake assembly consisted of total pressure (Pt) and total temperature (Tt) probes but no static pressure (Ps) probes. Also, the nozzle used in the 1995 tests is the same as that used for the 1996-97 tests. Similarly, the nozzle/mixer test conditions are also described in Part 1 for the 1996-97 tests. The test conditions for the 1995 tests described in section 2.0 are given in Table 1. As in Part 1, to simplify the discussion, the test conditions are hereafter referred to by the core NPR values.

1.0 Non-dimensional total temperature and velocity comparisons

The maximum measured, i.e. "centerline" total temperature was non-dimensionalized by dividing by the $T_{t \text{ ideal mixed}}$ where, from the energy equation:

$$T_{t \text{ ideal mixed}} = \frac{(m \cdot c_p \cdot T_t)_{\text{core}} + (m \cdot c_p \cdot T_t)_{\text{fan}}}{(m_{\text{core}} + m_{\text{fan}}) \cdot c_{p \text{ mixed}}},$$

m = weight flow rate, c_p = specific heat at constant pressure.

1.1 Maximum "centerline" Tt / ideal mixed Tt for all mixers

Fig. 1 shows the comparison of the maximum total temperature divided by ideal mixed total temperature versus x/D for all of the 1996-97 mixers at the 1.39 NPR core condition. This shows the 20 lobe deep mixer (20DH) to have a low temperature ratio, but, as noted in Part 1, the 20 lobe unscalped mixer (20UH) shows the lowest ratio but it only has data at three x/D values. Note that the ratios for all mixers tend to converge at x/D values near 10 which implies the location in the plume where centerline temperatures approach the ideal

mixed temperature. Fig. 2 shows similar trends for the 20 lobe deep mixer (20DH) for the 1.54 NPR)core condition. Fig. 3 shows a typical cross-section cut of the temperature ratio through the plume at $x/D=0.2$ for the Internal Tongue Mixer (12TH) which shows the same profile characteristics as reported previously in Part 1, except for being normalized with respect to the ideal mixed velocity.

Fig. 4 shows the same trend as Fig. 1 except for the higher operating condition of 1.74 NPR)core which causes the peak temperature ratio levels to be higher than shown in Fig. 1. Note that the temperature ratio for all mixers again approaches 1 near x/D of 10.

Fig. 5 illustrates schematically that the ideal mixed temperature is not the final equilibrium temperature for the plume. While the data shows that the ideal mixed temperature is reached at an x/D value approaching 10, the plume temperature must eventually reach the free stream ambient sink temperature to reach thermal equilibrium. While no plume temperature data was taken beyond x/D of 10, it is assumed that the plume temperature would exponentially decay to the sink temperature in a manner similar to that shown in Fig. 5, although the slope of the extrapolation may be flatter than shown.

1.2 Maximum "centerline" velocity / ideal mixed velocity

Turning now to the non-dimensional maximum "centerline" velocity comparisons, an ideal mixed velocity was defined as follows:

1. Calculate the mass flow rate averaged mixed NPR:

$$NPR_{mixed} = \frac{(m * NPR)_{core} + (m * NPR)_{fan}}{(m_{core} + m_{fan})}$$

2. Calculate isentropic velocity function from NPR) mixed and gamma)mixed, and calculated ideal mixed velocity using previously calculated T_t)mixed:

$$NPR_{mixed} \Rightarrow V_{ideal} / \sqrt{T_{t-mixed}}$$

$$V_{ideal} = V_{ideal} / \sqrt{T_{t-mixed}} * \sqrt{T_{t-mixed}}$$

where V_{ideal} is defined as the ideal "mixed" velocity.

It is noted that other definitions of "ideal mixed" velocity could be defined. For example, the ideal unmixed velocity of each stream can be calculated separately and then mass averaged to obtain a "mixed" ideal velocity. Another approach would be to calculate $m\sqrt{T_t} / (P_s A_{eff})$ for the mixed stream at the nozzle exit plane to obtain the velocity function which is then converted to ideal mixed velocity using the ideal mixed temperature as per above step 2. The "ideal mixed" velocity calculation method selected, while not claiming to be rigorous, is felt to be adequate for relative comparisons.

Figs. 6 and 7 show the measured maximum velocity divided by ideal mixed velocity for the 20 lobe deep mixer (20DH) and 12 lobe mixer with cutouts (12CL) at the 1.54 and 1.74 NPR)core operating conditions respectively. A characteristic decay similar to the non-dimensional T_t decay discussed previously is noted. The 20 lobe deep mixer (20DH) shows lower values compared to the 12 lobe mixer with cutouts (12CL), but, again the two mixers tend to converge near x/D values approaching 10. The curves tend to cross the ideal velocity (scale reading of 1.00) at x/D values of around 8.0, as

opposed to the previous temperature comparisons showing ideal mixed temperature levels being attained near x/D of 10.0

1.3 “ η ” temperature parameter for selected mixers at $x/D=0.2$

The non-dimensional total temperature parameter, η , is defined as:

$$\eta = \frac{(T_{t-\text{measured}} - T_{t-\text{fan}})}{(T_{t-\text{core}} - T_{t-\text{fan}})}$$

η is thus seen to vary between 0.0 and 1.0 since the measured T_t will either be equal to or greater than the fan T_t or equal to or less than the core T_t . This parameter is used by ASE FluidDyne as a non-dimensionalizing temperature “tracing” parameter in correlating data from dual flow model tests involving mixers, thrust-reversers, etc, to full-scale conditions.

If, for a given configuration, η is known from a model test, a corresponding full-scale “measured” temperature can be solved for by substituting into the η equation the corresponding full-scale core and fan T_t values provided the full scale unit is operated at the same NPR and BPR values as the model. Thus, η -correlations are of interest for applications of the test mixers to other operating conditions. It should be noted that for the 1996-97 NASA plume data shown here, the temperature data was obtained with an external free stream flow simulation of 0.2 Mach number. Thus any application of the η values to other mixer flow conditions would implicitly include this free stream simulation. The 0.2 Mach number external flow effect on plume decay does not appear to be highly significant in the near-field plume for x/D values up to

10.0 except locally along the outer plume mixing boundary.

Figs. 8 through 10 show the η distributions for the mixer with cutouts (12CL), at 100% and 50% nozzle length, and the internal tongue mixer (12TH) at the maximum test condition of $\text{NPR}_{\text{core}} = 1.74$ at $x/D = 0.2$. The 20 lobe deep mixer (20DH) was not tested at this condition at $x/D = 0.2$, but was tested at $x/D = 0.5$ as shown in Fig. 11. Previous comparisons of the T_t distributions from Part 1 do not show significant T_t decay between x/D of 0.2 and 0.5; thus, including Fig 11 with the other data comparisons at x/D of 0.2 is probably valid. In general, the η distributions reflect the same trends exhibited by the T_t distributions reported earlier in Part 1. This includes a rapid center spike, indicating temperatures approaching the core temperature near the centerline of the mixer, with an outer symmetrical “valley” profile followed by smaller “peaks”. The mixer with cutouts (Figs. 8 and 9) exhibiting the highest amplitude from “valley” to “peak”, followed by the internal tongue mixer (Fig. 10). The outer peaks and valleys were significantly reduced in amplitude for the 20 lobe deep mixer (20DH) (Fig. 11), again reflecting the previous T_t trends.

Fig. 12 shows a completely non-dimensionalized η plot for the internal tongue mixer where both the Z and Y dimensions have been normalized by the nozzle diameter, D. Although the η values in Fig. 12 are for $\text{NPR}_{\text{core}} = 1.54$, the distribution trends are very similar to those shown in Fig. 10 for $\text{NPR}_{\text{core}} = 1.74$.

Figs. 13 and 14 show η distributions at the $\text{NPR}_{\text{core}} = 1.39$ condition for the 20 lobe deep scalloped mixer (20DH) and 20 lobe unscalloped mixer (20UH) at $x/D=0.2$. Note that the unscalloped mixer, 20UH, (Fig. 14)

shows a slightly lower η value (lower measured T_t) at the centerline, as discussed earlier, compared to the 20 lobe deep scalloped mixer (20DH) (Fig. 14); however, note also that the η distributions in the annular areas where the mixers are located show less mixing occurring for the unscalped mixer (20UH) (more outer peak amplitude) compared to the deep scalloped mixer (20DH).

Comparing Figs. 13 and 14, by inspection it would appear that an integrated average η value (area under the curve) for the deep scalloped mixer (Fig. 13) would be less than the corresponding average η for the unscalped mixer (Fig. 14). If true, then the 20 lobe deep mixer (20DH) would exhibit greater mixing for all "outer" annular zones (Z values greater than ± 1.0 inch) except near the centerline of the mixer.

While the deeply scalloped mixer (20DH) is intuitively believed to have better mixing capability than the unscalped mixer (20UH), a presumption which is also suggested by the η comparisons in the outer zones of the plume, the reason for 20DH mixer's slightly higher maximum centerline η (and T_t) values is not immediately obvious.

It should also be noted that the small negative η values shown on the above figures is the result of temperature survey measurements extending outside the plume and into the external free stream which has a measured T_t value slightly lower than the fan stream T_t . The cross-over between negative and positive η values is thus indicative of the approximate location of the plume outer boundary.

1.4 " η " temperature parameter versus fan NPR at $x/D = 0.5$

Fig. 15 compares the effect of the fan NPR on the maximum centerline η value at $x/D=0.5$ for the 20 lobe deep mixer (20DH), internal tongue mixer (12TH) and 12 lobe mixer with cutouts (12CL)s. Note that the core NPR and T_t (core/ T_t) fan ratios are also changing according to the scheduled test values as the fan NPR changes. Thus, the η values plotted reflect the combined effect of all three flow variables changing simultaneously along a scheduled characteristic to simulate the engine thrust variation as described in Part 1, page 3. If the fan and core NPR values had been held constant, and only the T_t ratio varied, the η values would have been expected to be essentially constant in keeping with the non-dimensional characteristic of the η parameter.

In terms of maximum η levels, Fig. 15 basically reflects the same trends seen previously in the T_t plots, i.e., the 12 lobe mixer with cutouts (12CL) has the highest η values, the 20 lobe deep the lowest, and the tongue mixer being slightly lower than the 12 lobe mixer with cutouts (12CL).

2. Total temperature comparisons from 1995 mixer tests

During September, 1995 tests were conducted at NASA-Lewis to measure plume P_t and T_t data, and velocity (from LDV measurements), for the four mixers listed in Table II. Only the total temperature data was examined and reported below.

The 1995 tests used the same 100% length nozzle with 7.250 inch exit throat diameter as used in the 1996-97 plume testing. Only one set of flow condition was tested for the 1995 tests as given in Table I, which is the

same as the "Cycle F" conditions tested in 1996-97 except for the free stream Mach number values of 0.1 and 0.3. compared to 0.0 and 0.2 for the 1996-97 tests.

The 1996-97 Plume tests included the five mixers listed in Table II of Part 1. The 1995 Plume tests included four mixers as listed in Table II below.

The 1995 plume tests were of limited scope compared to the 1996-97 tests, and do not contain as complete a database. For example, the plume was only surveyed to an x/D value of 4.0 which is basically just outside the potential core region. Thus essentially no significant data were obtained to define the plume decay characteristics. Also, there appears to be an alignment problem between the nozzle centerline and the corresponding center origin of the Tt measurements which is obvious when viewing the x/D profiles which are off-set approximately 1 to 1.5 inches from the center of the measured Tt array.

Still the maximum Tt values were recorded, however, which minimizes the effect of this. Also, the Z dimension was not referenced from the nozzle centerline, but from the end of the Tt rake. This orientation is shown on each of the Tt plots presented below. The Y values are defined the same as in the Part 1 data, i.e., the horizontal distance from the center of the array, which, as note above, may not be in alignment with the nozzle centerline. While this rake misalignment is unfortunate and frustrating, it is still possible to get a reasonable recording of the Tt profiles at each Y value except near the right edge of the plots where the data is cut off.

Figs 16 through 20 show Tt profiles for the confluent mixer at x/D values of 0.1, 0.5, 1.0, and 4.0. As expected, these profiles show a basically symmetrical "pipe flow"

profile for the hot core region dropping off to the cold fan Tt levels in the outer annulus areas. These profiles are, of course, significantly different than the typical lobe mixer profiles that are shown in Part 1. Fig 19 shows the Tt profile at x/D of 4.0, which has become more parabolic and symmetrical. Fig 20 is the same condition but a re-peat point which shows good repeatability in the data.

Figs. 21 through 24 show Tt profiles at the same conditions as above for the 12 lobe mixer with cutouts (12CL). The profiles are similar from x/D of 0.1 to 1.0 exhibiting the high temperature center spike superimposed on the lower temperature peaks and valleys near the mixer as seen earlier in Part 1. At x/D of 4.0, fig. 24, note the similarity in profile parabolic shape with the data in fig. 20 for the confluent mixer, but note that the former has a significantly lower maximum centerline Tt and a flatter parabolic shape due to the mixing enhancement from the lobes.

The mixer with cutouts from the 1995 plume testing was also re-tested during the 1996-97 plume testing. The repeatability of this re-testing is compared at $x/D=0.5$ in Fig. 22 for the 1995 test and in Fig. 25 for the 1996-97 test. The free stream Mach number was 0.3 for the 1995 test data in Fig. 22, and 0.2 for the 1996-97 data in Fig. 25. Also, of course, the Z dimension to the Tt probe is referenced differently in the two tests as mentioned earlier which means the data in Fig. 22 is not centered correctly relative to the nozzle centerline. However, comparing the two sets of data it is noted that the peak centerline Tt values are approximately 1210 °R for the 1995 test and 1171 °R for the 1996-97 tests. The ambient Tt was approximately 46 degrees hotter for the 1995 tests, but the free stream Mach number was 0.1 higher. Both differences may have

some influence on the max. temperature differences. The T_t profiles appear to be similar in both tests in regard to the outer peaks but some differences are noted in the outer valleys, and at other off-center Y values, that are not immediately understood and are noted here for future reference.

Figures 26 through 29 show T_t profiles for the 12 lobe unscalped mixer (12UH) at x/D values of 0.1, 0.5, 1.0, and 4.0. Similar trends as noted above for the 12 lobe baseline (12CL) are also seen for the 12 lobe unscalped mixer (12UH) for x/D values up to 1.0 except that 12UH shows lower maximum T_t values. A more significant profile difference was noted at x/D of 4.0, comparing Fig. 24 with Fig. 29, wherein the 12 lobe unscalped mixer (12UH) shows a convex or "bowed" out profile for Z distances outside the central high temperature spike and the 12 baseline shows the concave or parabolic profile in the same region. Also a nonsymmetrical "dip" in the left side of the 12 lobe unscalped profile, in Fig. 29, where the center spike region begins to develop appears to be a local anomaly in the data.

Figures 31 through 33 show T_t profiles for the 16 lobe unscalped mixer at x/D values of 0.1, 0.5, 1.0, and 4.0. The data shows the usual center peak as seen in the other lobe mixers but at a lower T_t maximum value than the 12 lobe baseline or 12 lobe unscalped mixer (12UH). A more complex peak and valley profile sub-structure is noted, presumably due to the increased number of lobes, for x/D values up to 1.0. However, at the x/D value of 4.0, Fig. 33, the profile has a similarity to the convex profile noted for the 12 lobe unscalped mixer (12UH), Fig. 29.

Figure 34 summarizes the maximum "centerline" T_t decay for the 1995 NASA

test mixers for x/D values up to the maximum tested of 4.0. The significant T_t reduction provided by the lobe "forced" mixers over the confluent "free" mixer is apparent from Fig. 34. The 16 lobe unscalped mixer (16UH) had the lowest maximum T_t values being significantly lower than the 12 lobe mixer with cutouts (12CL). The corresponding T_t decay for the 12 lobe unscalped mixer (12UH) was about midway between the 12 lobe baseline mixer with cutouts (12CL) and 16 lobe unscalped mixers. For comparison, the corresponding data for the 1996-97 NASA LeRC tests are shown in Fig. 1 of Part 1.

2.0 Total temperature contour plots for selected mixers and test conditions

The X-Y total temperature data grid for selected mixers and test conditions was converted to an R-theta polar grid by processing the NASA data using the Field View program. Some interpolation of the data field is required, which is done by Field View, to fill in the required polar coordinates from the rectangular coordinates. The results of this conversion are contour plots of total temperature taken in a perpendicular "slice" across the plume as viewed looking downstream in the direction of flow. The temperature contours on these plots are thus more easily identifiable with the corresponding mixer lobe geometry. It should also be noted that the contour plots are presented in degrees F whereas all other plume temperature plots in this report are in degrees R.

3.1 Contour plots for selected mixers from 1996-97 plume tests

Figs 35 through 41 show total temperature contour plots for the 1996-97 NASA test mixers. Figs 35 through 37 show the data for the "full" survey taken at $x/D=0.2$ at the

1.74 NPR)core condition for the 12 lobe baseline (12CL) with 100% length nozzle, 12 lobe baseline (12CL) with 50% length nozzle, and the internal tongue mixer (12TH). Also superimposed on the contour plot is the nozzle exit diameter circle of 7.25 inches for reference.

Figs 35 and 36 readily show the spatial orientation of the mixer lobes and the center hot zone near the centerline for the 12 lobe mixer with cutouts (12CL). The temperature variation between the hot and cold side of the lobes, the relative degree of mixing that has occurred in the outer portions of the flow-field, and lack of mixing in the very central portion of the flow-field can be deduced from the temperature contours. Fig 36, for the shorter 50% nozzle length, appears to show more radial higher temperature zones between the lobes suggesting less mixing than that shown for the 100% nozzle length in Fig. 35. Fig. 37 shows similar data for the 12 pair internal tongue mixer (12TH) but indicates the presence of 12 distinct contours from the tongues with somewhat different interior mixing contours.

Figs. 38 through 41 show the same type of contour data for the above mixers, plus the 20 lobe deep scalloped mixer (20DH), taken at x/D of 0.5. These data were taken for a "center" survey where the Y value was only traversed from -0.75 inches to +0.75 inches as opposed to a "full" survey. While this data is more limited in scope, it shows the same general patterns as noted above. Note that the contour data for the 20 lobe deep scalloped mixer (20DH), shown in Fig. 41, reflects apparent increased mixing by virtue of the coalescing of the discrete contours around the lobes into a more uniform temperature flow-field.

3.2 Contour plots for selected mixers from 1995 Plume tests

Figures 42 through 45 show total temperature contour plots for the confluent mixer, 12 lobe baseline mixer (12CL), 12 lobe unscalped mixer (12UH), and 16 lobe unscalped mixer (16UH) at the stated NPR)core condition respectively. The annular contours of the confluent mixer, shown in Fig. 42, are seen to be fundamentally less complex, and less mixed, than the typical contours generated by the lobed mixers as expected. Also, the 12 lobe unscalped mixer (12UH) contours, Fig. 44, are different than those for the 12 lobe mixer with cutouts (12CL), Fig. 43. The 16 lobe unscalped mixer's (16UH) lobe pattern is reflected in the contours shown in Fig 45 which appears to show more mixing penetration into the peak center area.

4.0 Conclusions

1. The 1996-97 AST mixer plume testing has generated a very significant database of plume measurements for several Rolls-Royce Allison mixers. Additional plume data, although more limited in scope, was also obtained for these mixers tested at NASA-LeRC during the first test series in 1995. A small portion of this combined database has been presented in this report, and in Part 1, and other plots of specific interest can be generated as required in the future.

2. The non-dimensional maximum "centerline" total temperature divided by ideal mixed temperature (temperature ratio) plotted versus x/D axial distance shows the same relative trends that were seen previously as reported in Ref.1. The 20 lobe deep scalloped mixer (20DH) and 20 lobe unscalped mixer (20UH) show more rapid centerline decay than the 12 lobe baseline

mixer (12CL) or internal tongue mixer (12TH). The temperature ratios for all mixers tend to converge at x/D values approaching 10 which suggest the axial location where the centerline temperatures approach ideal mixed temperatures. (See figs. 1 and 4)

3. The ideal mixed temperature is not the final thermal equilibrium temperature of the plume which will continue to decrease, beyond x/D of approximately 10, to the free stream sink temperature. An extrapolation of the maximum centerline decay curve suggests that the ambient temperature level would be reached around x/D of 30, or higher, depending on the extrapolation used. (See fig. 5)

4. The non-dimensional maximum "centerline" velocity divided by the ideal mixed velocity (velocity ratio) plotted versus x/D shows a decay characteristic trend that is similar to the temperature ratio decay. It was observed that the velocity ratio plots tend to cross the ideal velocity level at x/D values near 8.0, whereas the temperature ratio tends to cross the ideal mixed temperature level at x/D values near 10 (See figs. 6 and 7).

5. The "η" non-dimensional total temperature parameter was generated for several test and mixer conditions. This data may be useful for predicting full scale engine plume temperatures for given fan and core temperatures (See figs. 8 through 15).

6. The 1995 plume data for 12CL, 12UH and 16UH mixers showed relative trends that are similar to those reported earlier for the 1996-97 plume data. As expected, the 1995 data also showed the significant mixing enhancement superiority, as gauged by the maximum "centerline" temperature decay, provided by the lobe mixers over the

confluent mixer. (See fig. 34). The 16 lobe unscalped mixer (16UH) exhibited the lowest maximum "centerline" total temperature levels of all mixers tested at a common comparison point (1.39 NPR core). It is presumed that this trend would also apply at the other test conditions although the data is missing to substantiate this. (See fig. 34 in this report and fig. 61 in Ref.1).

7. The total temperature contour plots are helpful in visualizing the spatial orientation of the individual plumes from the mixer lobes and the center hot zone that was typical for all of the lobe mixers (See figs. 35, 36 and 36). The basically annular temperature contours for the confluent mixer are, by contrast, seen to be fundamentally less complex and less mixed than those for the lobed mixers (See fig. 42).

8. When comparing the maximum centerline temperatures of the plume, the variation in bypass ratio from mixer to mixer should be taken into account. In most cases the variation is small; however, the 16 lobe unscalped mixer (16UH) resulted in a relatively higher BPR compared to the other mixers tested. This mixer would have a larger percentage of cold fan flow, which would have a more diluting effect on the hot plume temperatures in the region of the plume beyond the central hot core. This would in turn tend to reduce the mixed temperature decay based on simple heat balance considerations. Thus the lowest centerline temperatures recorded for the 16 lobe unscalped mixer (16UH) may have been primarily due to the higher BPR dilution effect rather than from superior mixer characteristics from the lobe design.

Table I Test Conditions for 1995 NASA Mixer Plume Tests

| NPR)core | NPR)fan | Tt)core/Tt)fan | Mach No., M(fj) |
|-----------------|----------------|-----------------------|------------------------|
| 1.39 | 1.44 | 2.34 | 0.1 & 0.3 |

Table II 1995 Rolls-Royce Allison/NASA Mixers

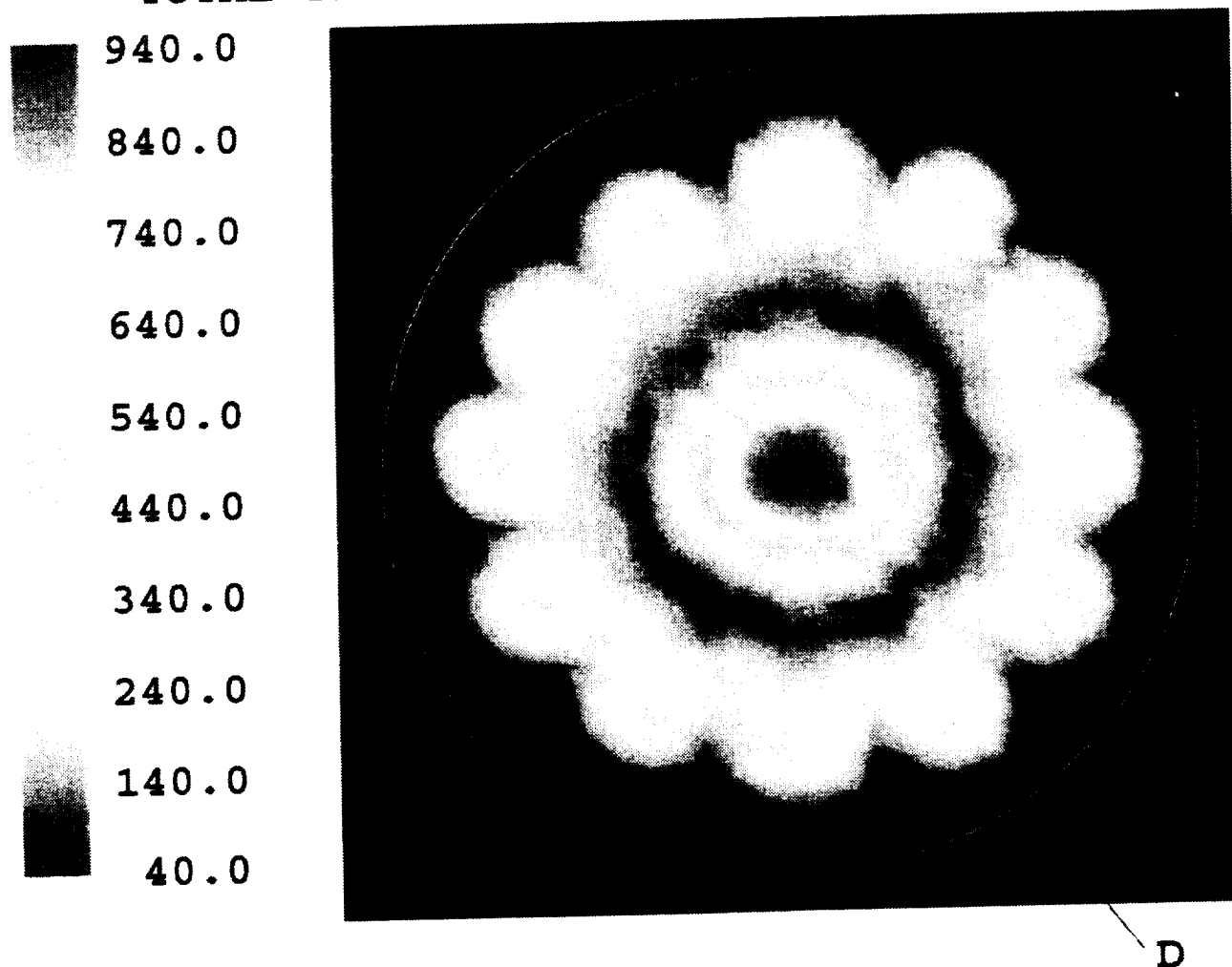
| Mixer Description | Exhaust Nozzle Length | Comments |
|----------------------------|------------------------------|-----------------------------|
| 12 lobe baseline(*) (12CL) | 100% | With lobe sidewall cut-outs |
| Confluent (CONF) | 100% | |
| 12 lobe Advanced (12UH) | 100% | No scallops |
| 16 lobe Acoustic (16UH) | 100% | No scallops |

(*) The 12 lobe Mixer with cutouts (12CL) was also re-tested during 1996-97 testing

FIGURE 1

12 LOBE BASELINE MIXER-100% NOZZLE LENGTH

TOTAL TEMPERATURE - F AT $X/D = 0.2$



$D=7.25\text{in.}$; $NPR_c=1.74$; $NPR_f=1.82$; $TTC/TTf=2.79$; $M=0.2$

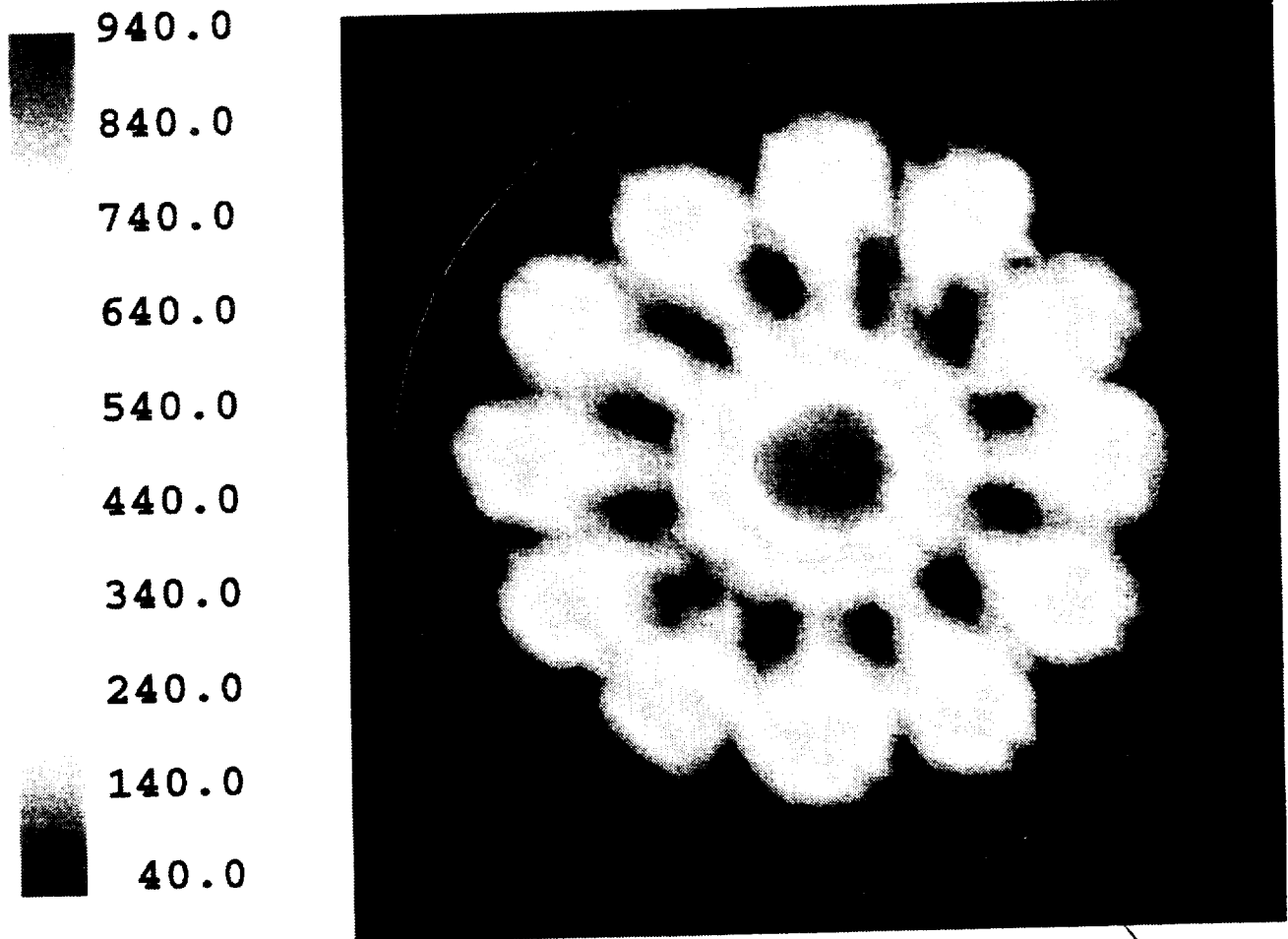
1996 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T576

FIGURE 2

12 LOBE BASELINE MIXER-50% NOZZLE LENGTH

TOTAL TEMPERATURE - F AT $X/D = 0.2$



$D=7.25\text{in.}$; $\text{NPRc}=1.74$; $\text{NPRf}=1.82$; $\text{TTC}/\text{TTf}=2.79$; $M=0.2$

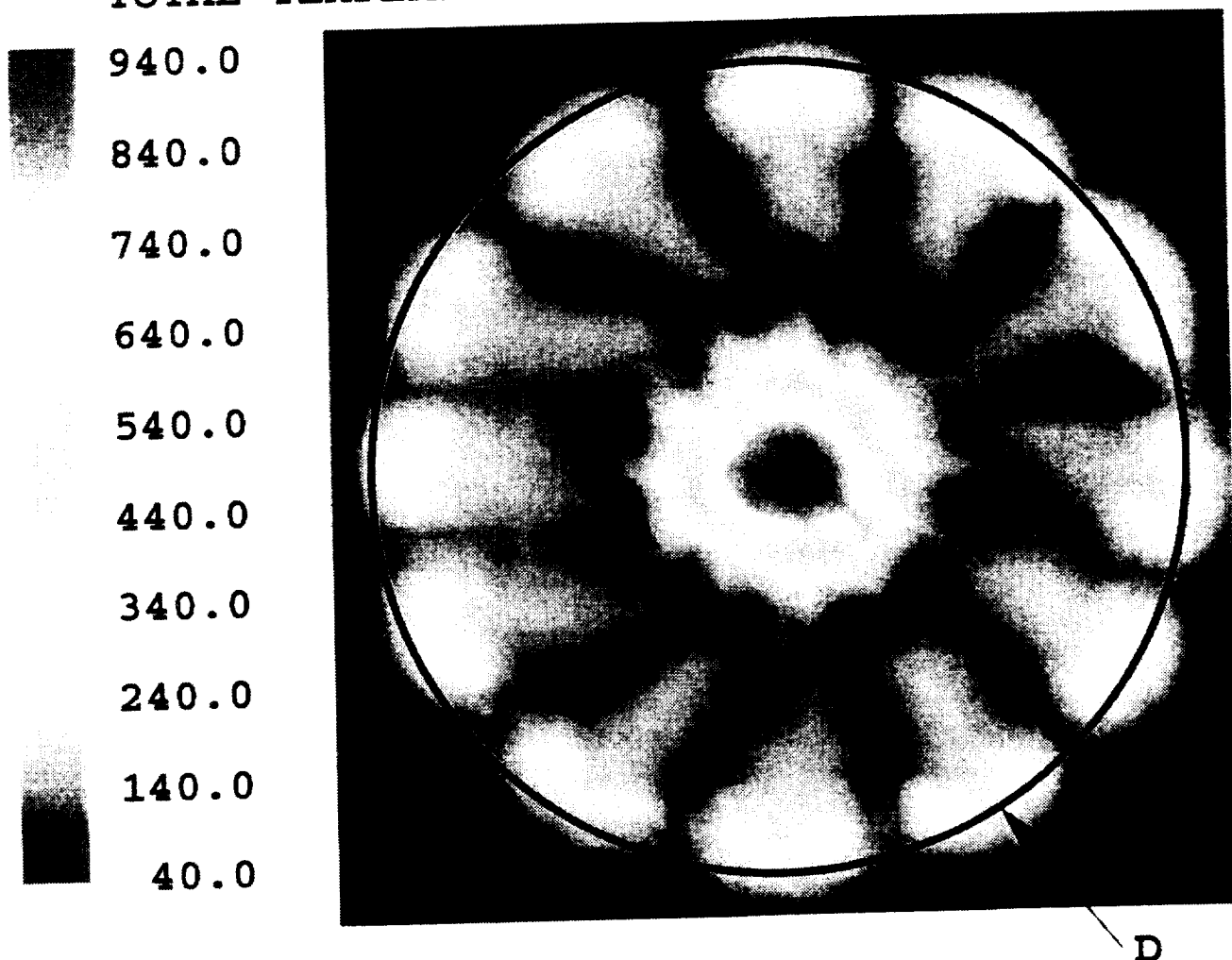
1996 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T597

FIGURE 3

INTERNAL TONGUE MIXER

TOTAL TEMPERATURE - F AT $X/D = 0.2$



$D=7.25\text{in.}$; $NPR_c=1.74$; $NPR_f=1.82$; $TT_c/TT_f=2.79$; $M=0.2$

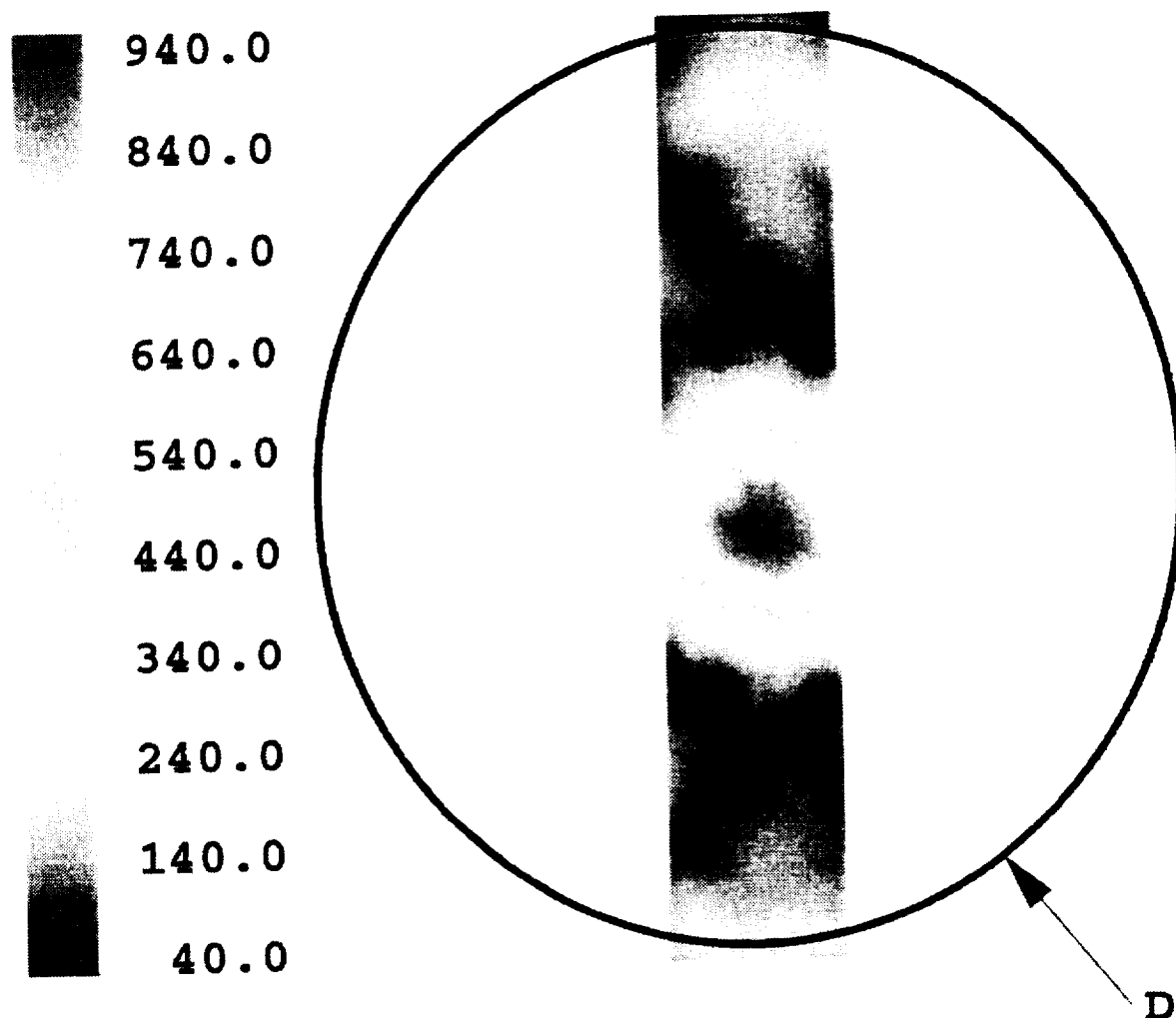
1996 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T508

FIGURE 4

INTERNAL TONGUE MIXER

TOTAL TEMPERATURE - F AT $X/D = 0.5$



$D=7.25\text{in.}$; $\text{NPRc}=1.74$; $\text{NPRf}=1.82$; $\text{TTC}/\text{TTf}=2.79$; $M=0.2$

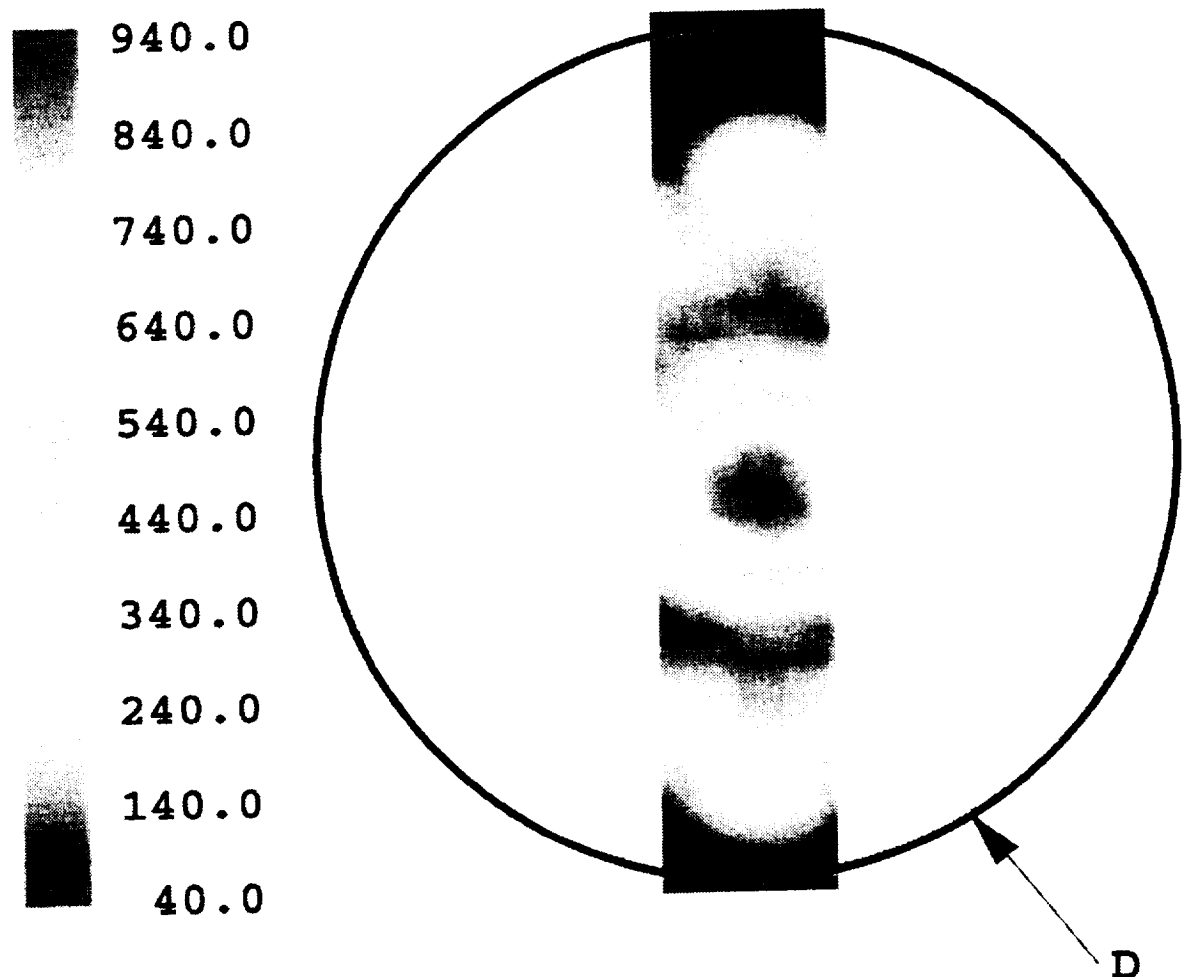
1996 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T532

FIGURE 5

12 LOBE BASELINE MIXER-100% NOZZLE LENGTH

TOTAL TEMPERATURE - F AT $X/D = 0.5$



$D=7.25\text{in.}$; $\text{NPRc}=1.74$; $\text{NPRf}=1.82$; $\text{TTC}/\text{TTF}=2.79$; $M=0.2$

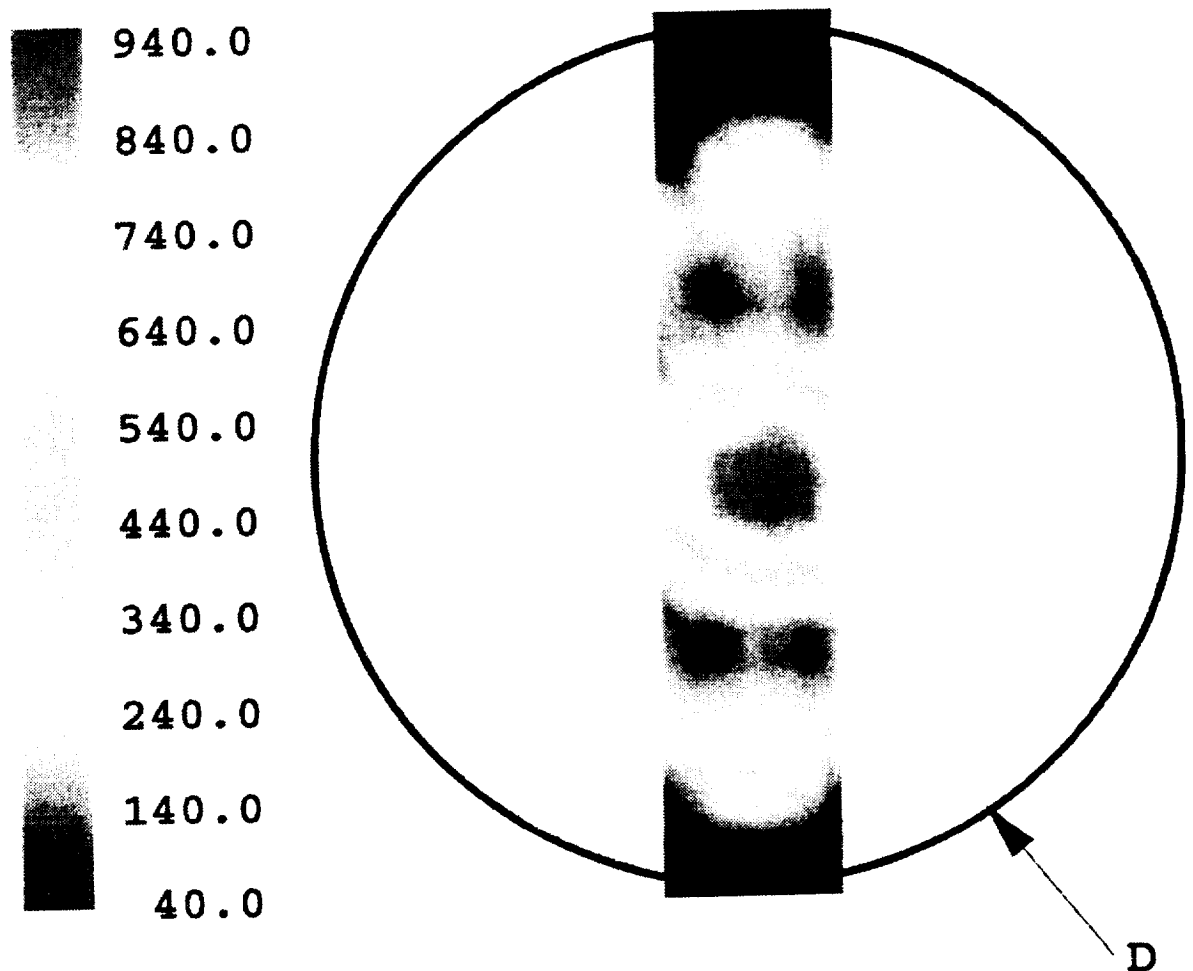
1996 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T578

FIGURE 6

12 LOBE BASELINE MIXER-50% NOZZLE LENGTH

TOTAL TEMPERATURE - F AT $X/D = 0.5$



$D=7.25\text{in.}$; $\text{NPRc}=1.74$; $\text{NPRf}=1.82$; $\text{TTC}/\text{TTf}=2.79$; $M=0.2$

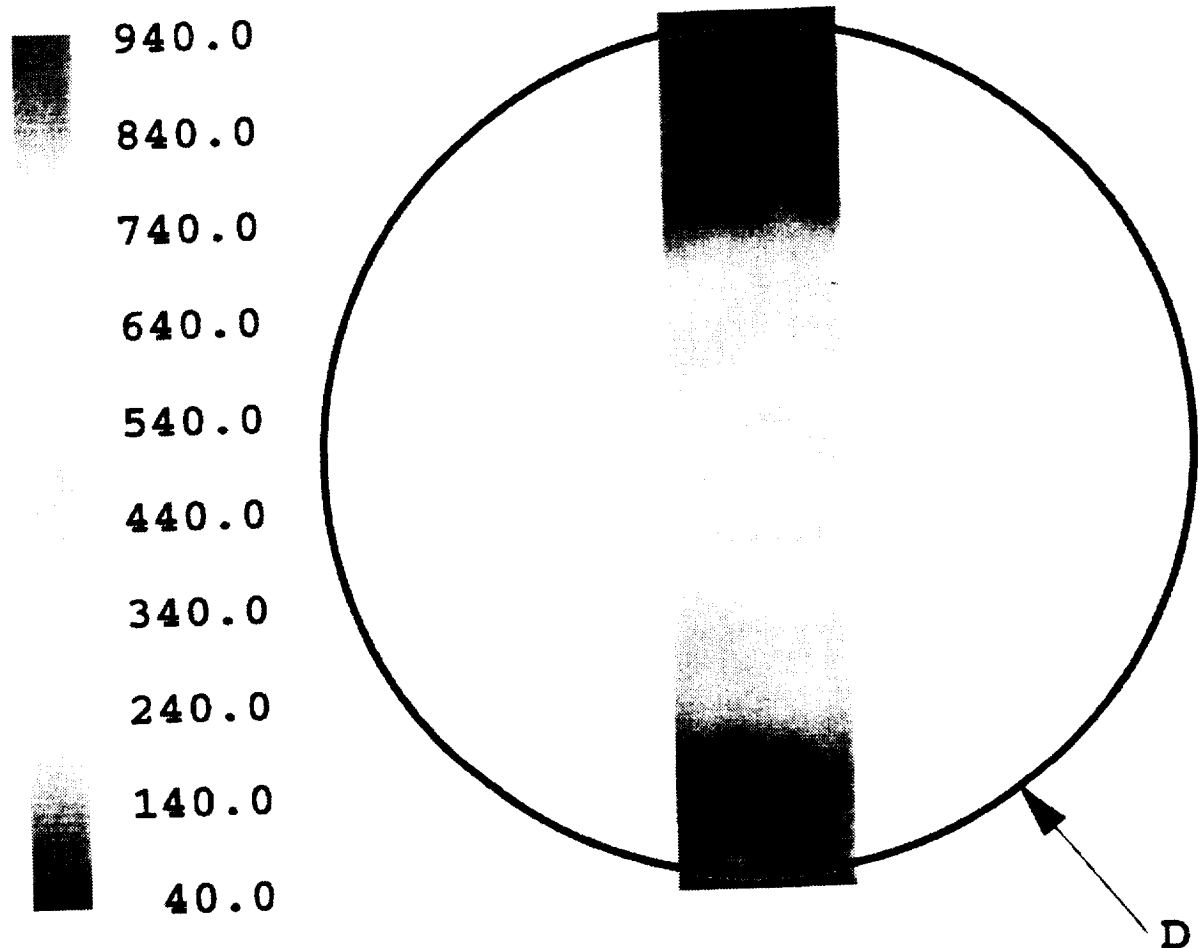
1996 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T598

FIGURE 7

20 LOBE DEEP SCALLOP MIXER

TOTAL TEMPERATURE - F AT $X/D = 0.5$



$D=7.25\text{in.}$; $\text{NPRc}=1.74$; $\text{NPRf}=1.82$; $\text{TTC}/\text{TTf}=2.79$; $M=0.2$

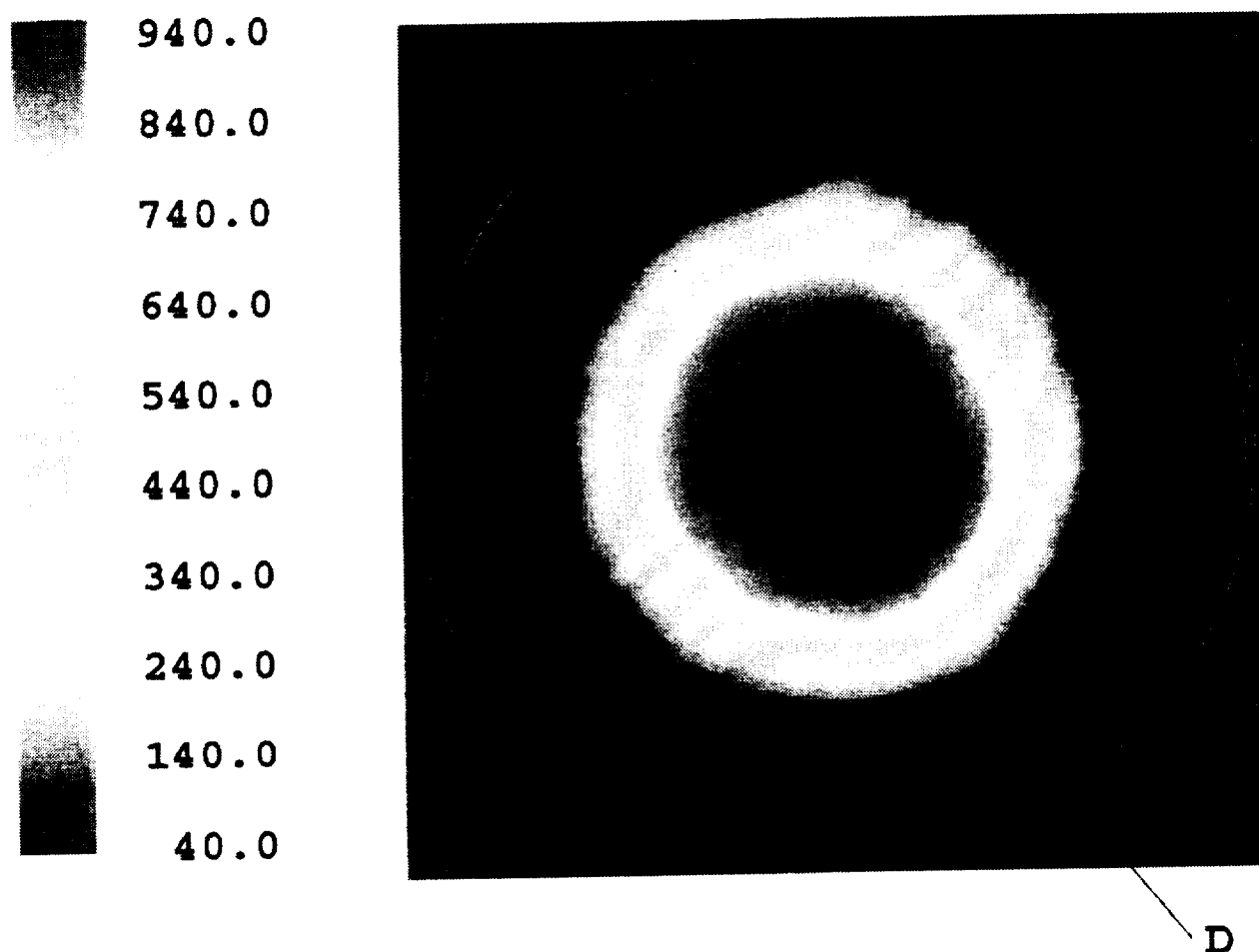
1996 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T542

FIGURE 8

CONFLUENT MIXER

TOTAL TEMPERATURE - F AT $X/D = 0.1$



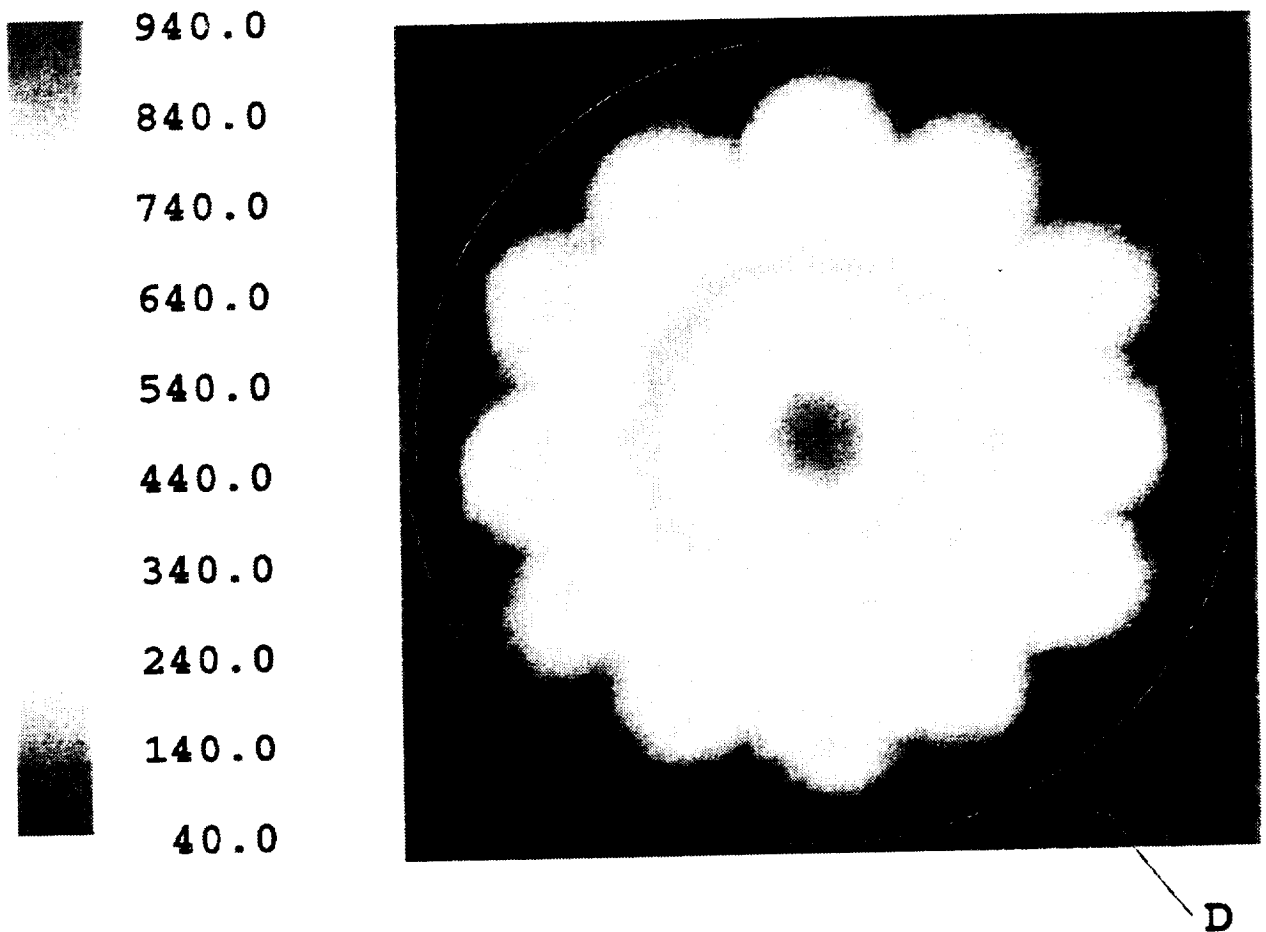
$D=7.25\text{in.}$; $\text{NPRc}=1.39$; $\text{NPRf}=1.44$; $\text{TTC}/\text{TTf}=2.34$; $M=0.1$

1995 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T324

FIGURE 9

12 LOBE CONVENTIONAL MIXER
TOTAL TEMPERATURE - F AT $X/D = 0.1$



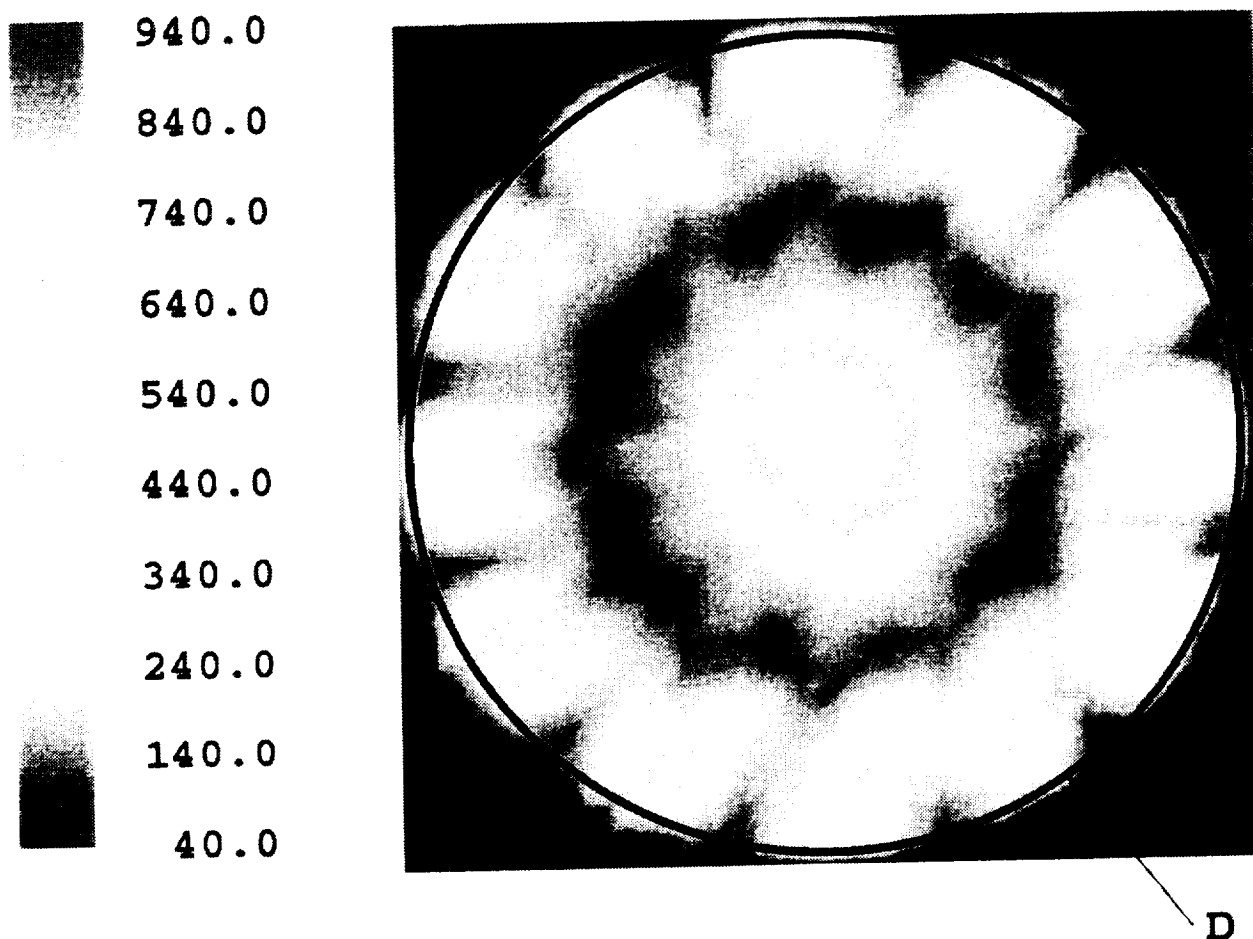
$D=7.25\text{in.}$; $\text{NPRc}=1.39$; $\text{NPRf}=1.44$; $\text{TTC}/\text{TTf}=2.34$; $M=0.1$

1995 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T355

FIGURE 10

12 LOBE ADVANCED MIXER
TOTAL TEMPERATURE - F AT $X/D = 0.1$



$D=7.25\text{in.}$; $\text{NPRc}=1.39$; $\text{NPRf}=1.44$; $\text{TTc}/\text{TTf}=2.34$; $M=0.1$

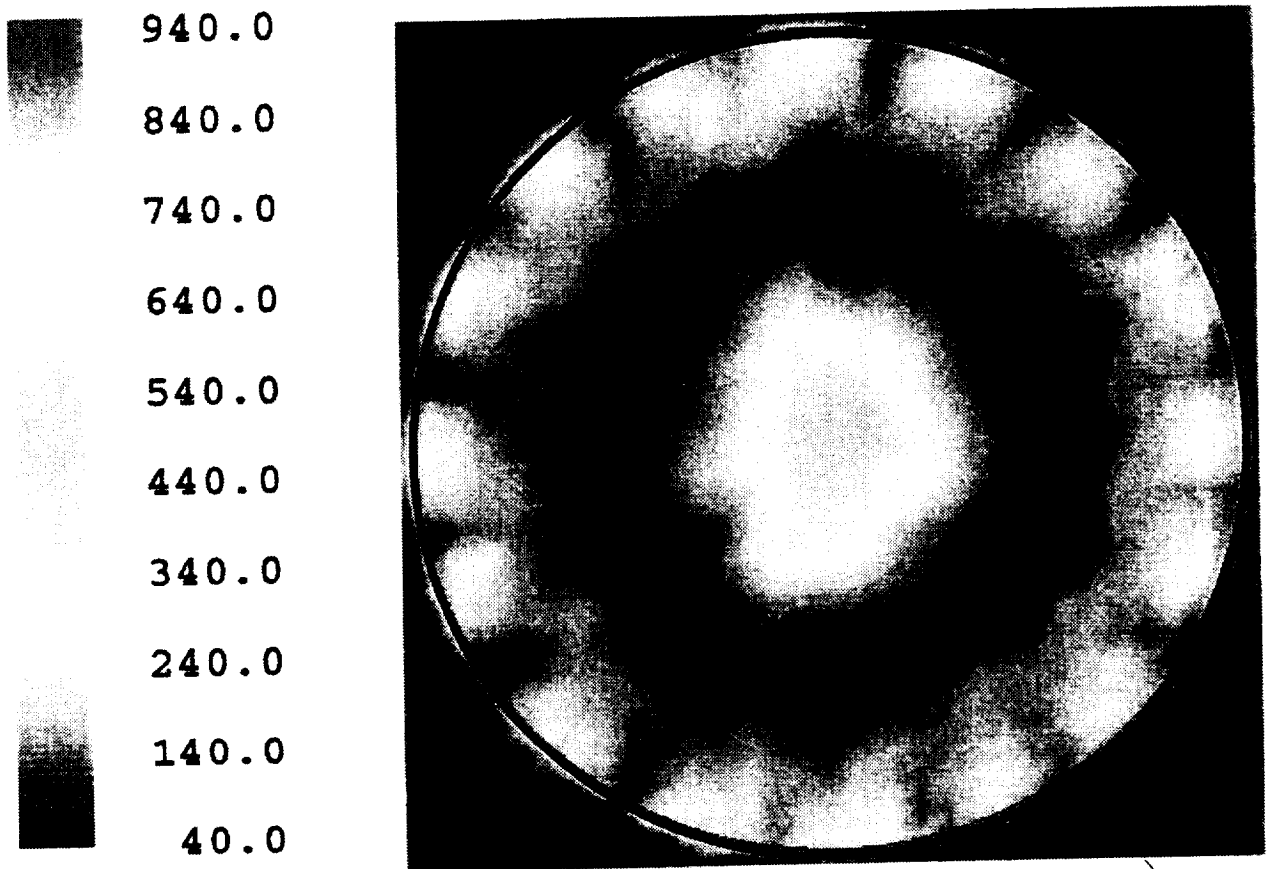
1995 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T409

FIGURE 11

16 LOBE ACOUSTIC MIXER

TOTAL TEMPERATURE - F AT $X/D = 0.1$



$D=7.25\text{in.}$; $NPR_c=1.39$; $NPR_f=1.44$; $TTC/TTf=2.34$; $M=0.1$

1995 NASA-LeRC ACOUSTIC MIXER/PLUME TESTS

READING NUMBER T378

FIGURE 12

Figure 12. Ratio of Maximum "Centerline" Total Temperature to Ideal Mixed Total Temperature vs. x/D for 12L Baseline, Internal Tongue, & 20L Mixers; NPR(core)=1.39, NPR(fan)=1.44, $Tt_{core}/Tt_{fan}=2.34$, $Mn/FS=0.2$; 1996 NASA-LeRC Acoustic Mixer / Plume Tests

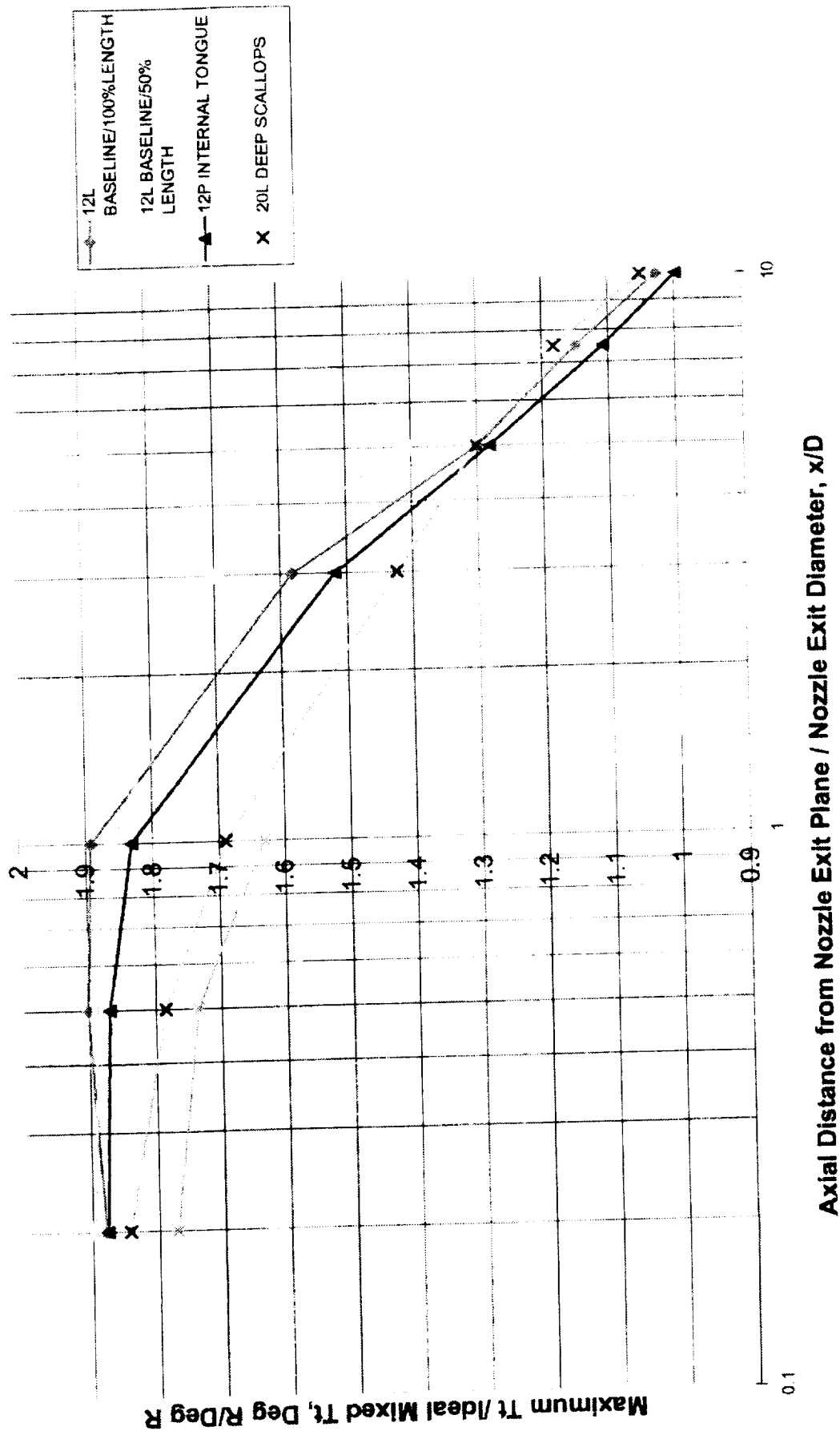


FIGURE 13

Ratio of Maximum "Centerline" Total Temperature to Ideal Mixed Total Temperature vs. x/D
for 20L Deep Mixer, 100% Nozzle Length; 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan,
0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer / Plume Tests

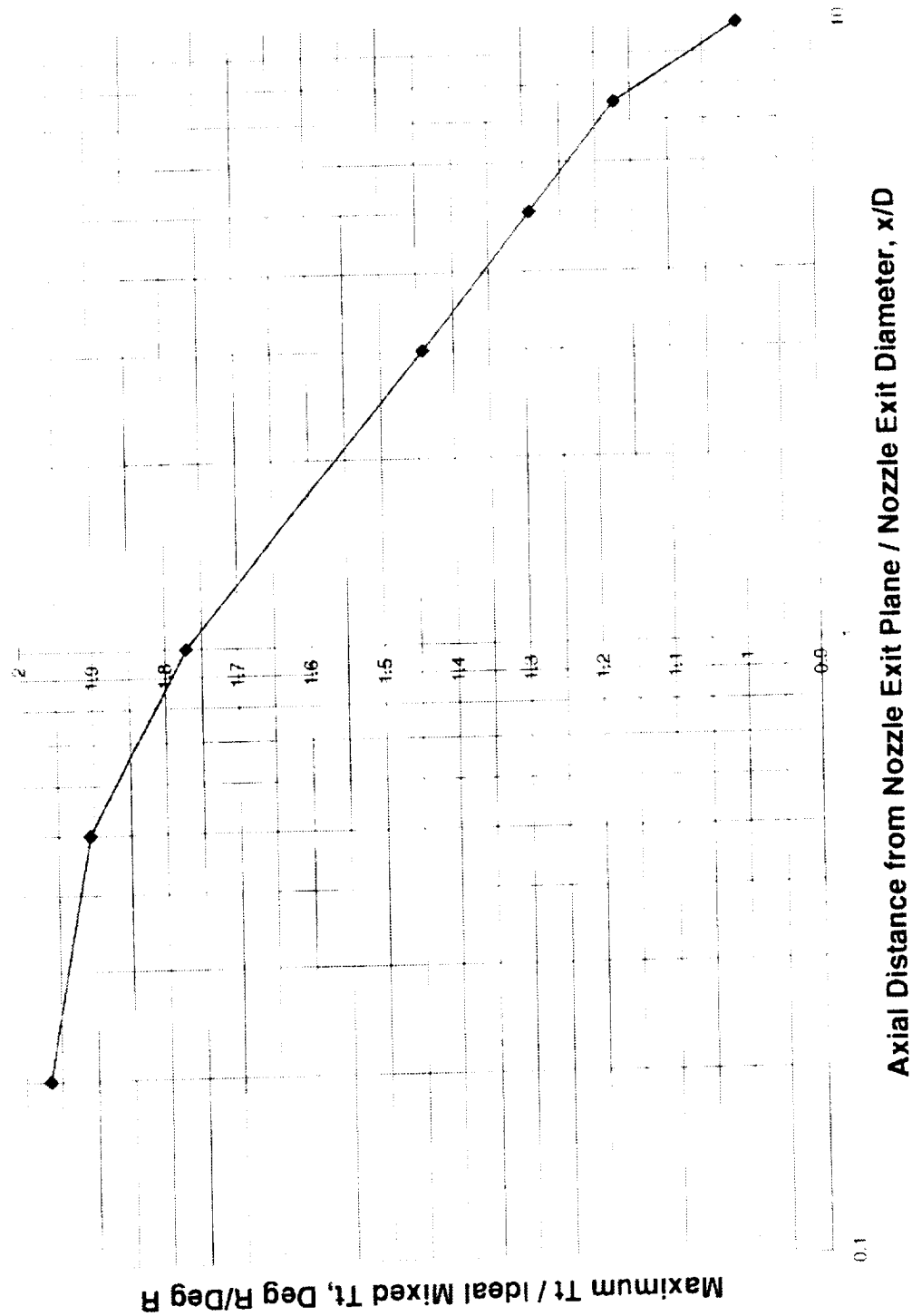


FIGURE 14

Internal Tongue Mixer - Nondimensional Tt Sweep at $x/D=0.2$, NPR)core=1.54, NPR)fan=1.61, NPR)mavg=1.597, Mn)FS=0.2, Tt)idmix=649.7R, 1996 NASA-LeRC Mixer Plume Tests, Rdg# TT510

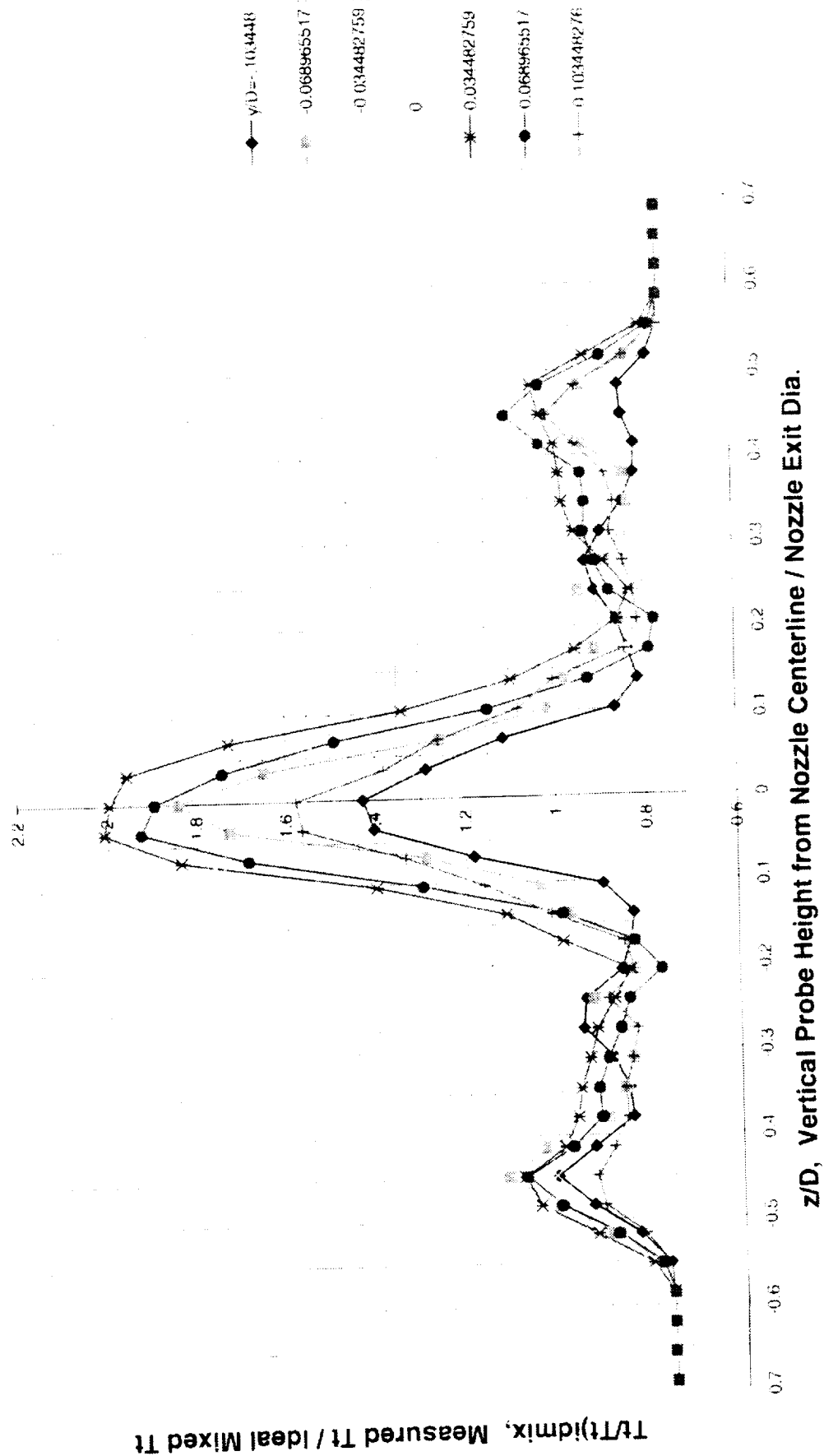


FIGURE 15

Ratio of Maximum "Centerline" Total Temperature to Ideal Mixed Total Temperature vs. x/D
for 12L Baseline, 20L Deep & Internal Tongue Mixers; NPR(core)=1.74, NPR(fan)=1.82,
 $Tt(\text{core})/Tt(\text{fan})=2.79$, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer / Plume Tests

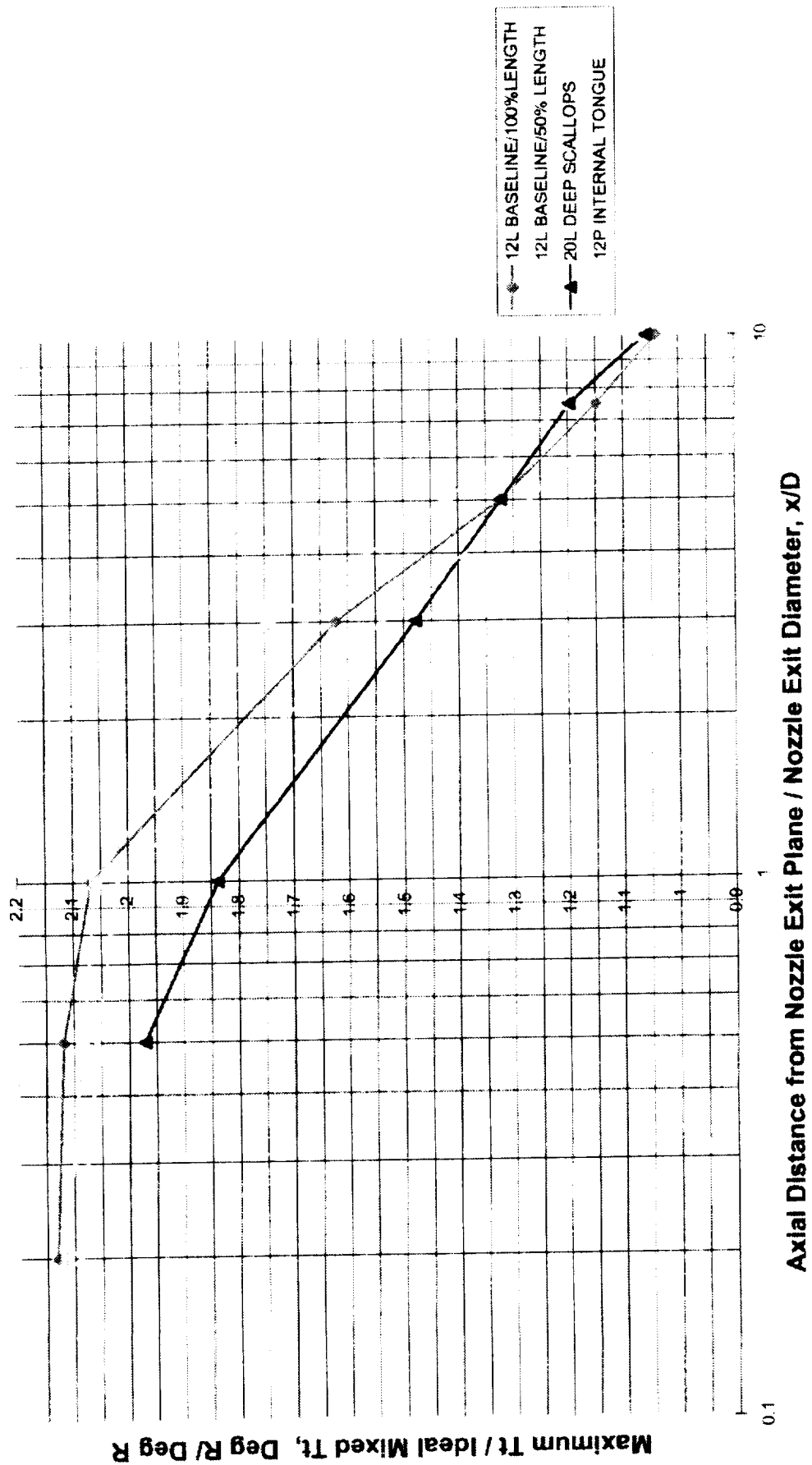


FIGURE 16

Example of Extrapolation of Maximum Total Temperature Decay to Ambient Sink Temperature

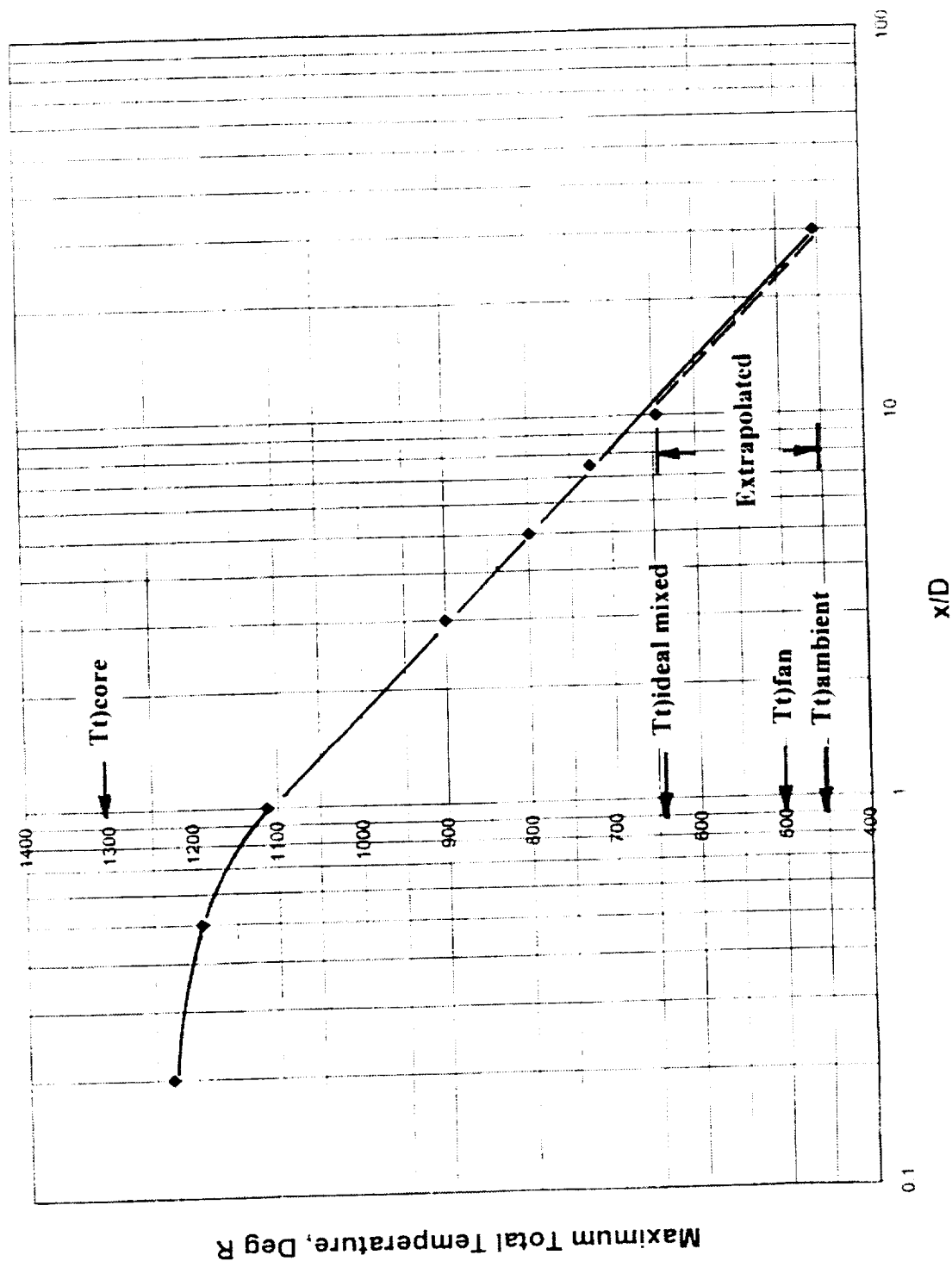
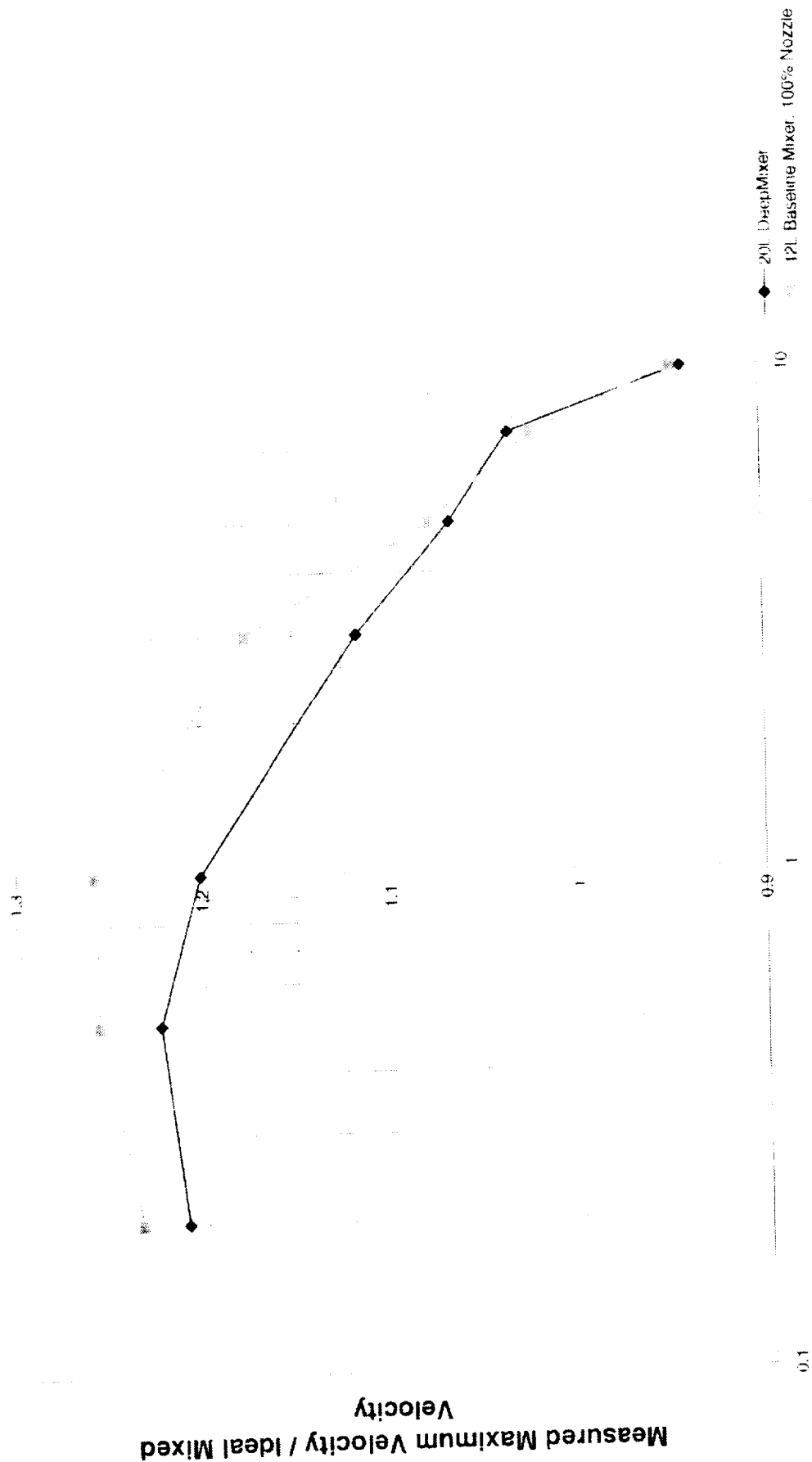


FIGURE 17

Ratio of Maximum "Centerline" Velocity to Ideal Mixed Velocity for 20L Deep and 12L Baseline Mixers; 1.54 NPR)core, 1.61 NPR)fan, 2.62 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer / Plume Tests



Axial Distance from Nozzle Exit Plane / Nozzle Diameter, x/D

FIGURE 18

Ratio of Maximum "Centerline" Velocity to Ideal Mixed Velocity for 20L Deep and 12L Baseline Mixers; 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests

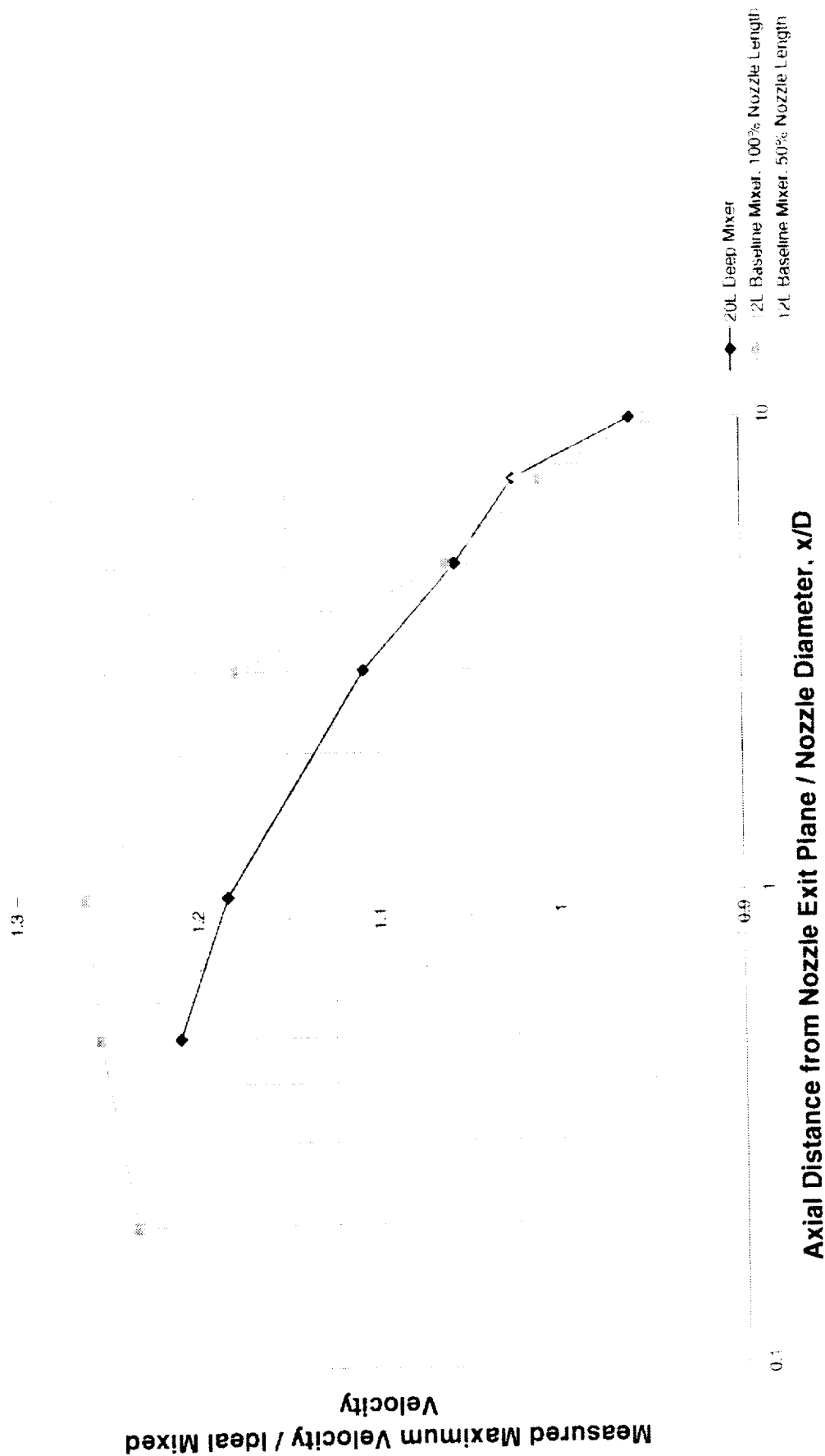


FIGURE 19

Eta Distribution for 12L Baseline Mixer at $x/D=0.2$, 100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt(core/Tt)fan, 0.2Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # TT576

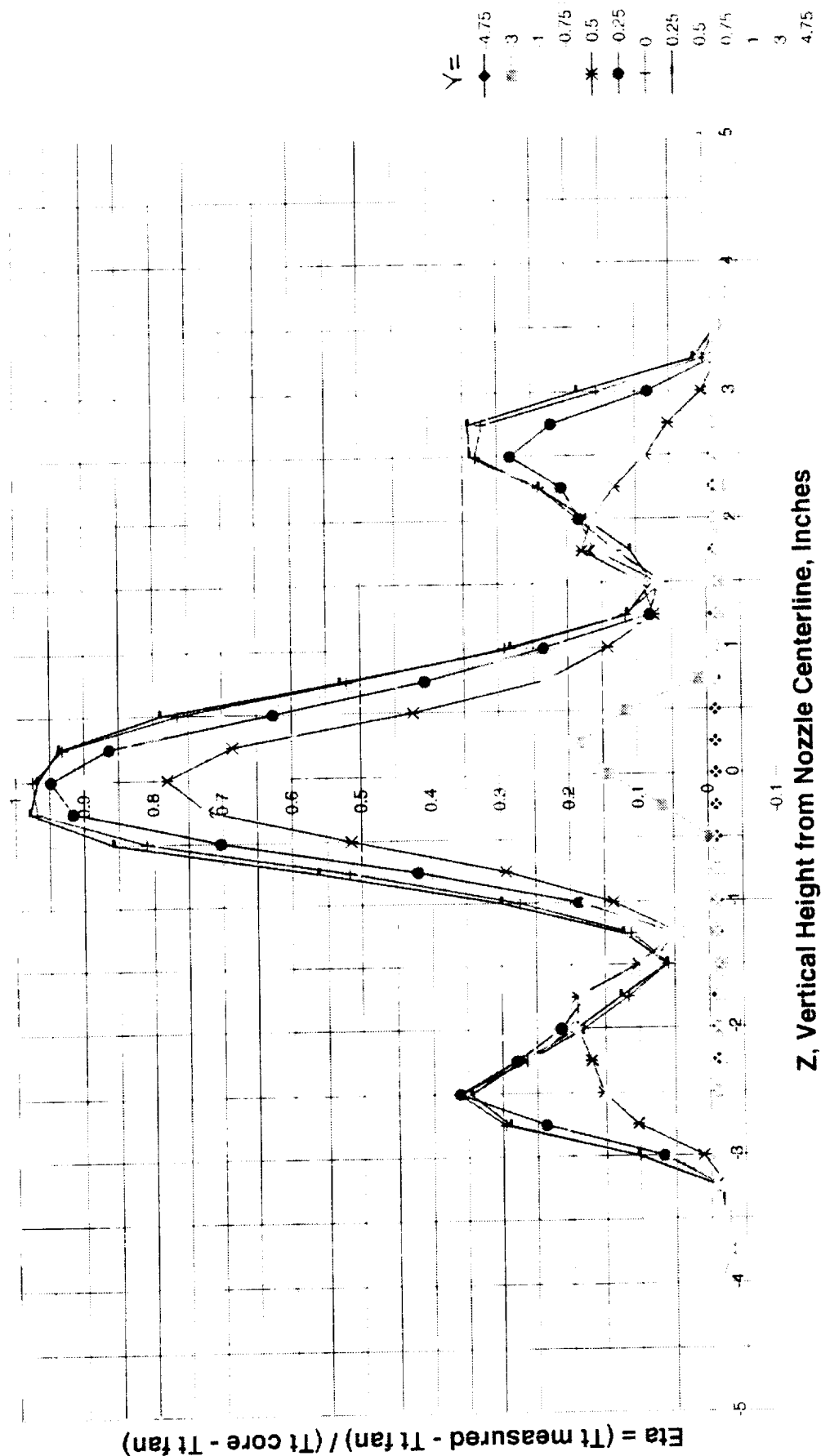


FIGURE 20

Eta Distribution for 12L Baseline Mixer at $x/D=0.2$, 50% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # TT597

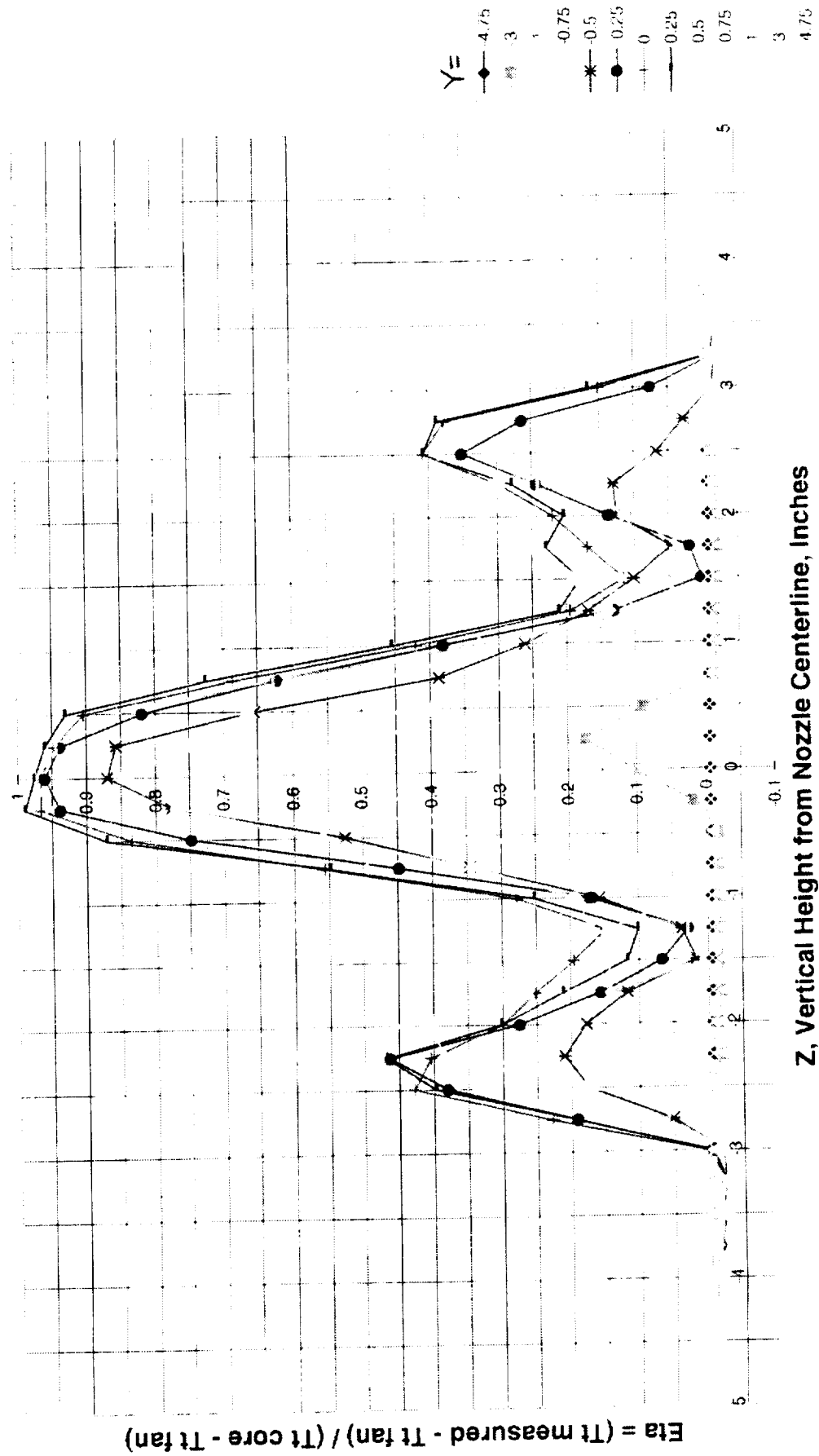


FIGURE 21

Eta Distribution for Internal Tongue Mixer at $x/D=0.2$, 100% Nozzle Length, 1.74 NPR)core, 1.82NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # TT508

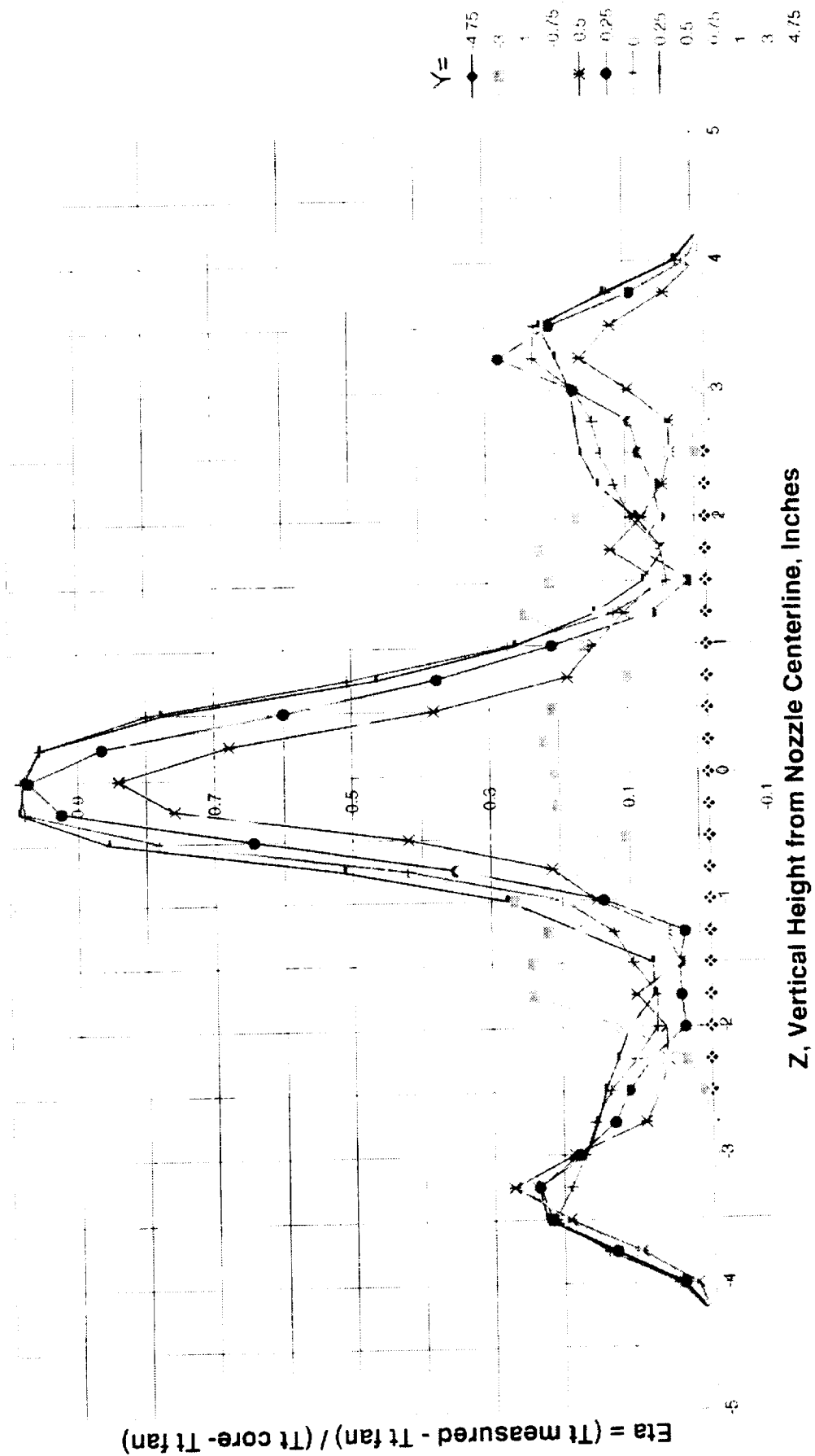


FIGURE 22

Eta Distribution for 20L Deep Mixer at $x/D=0.5$, 100% Nozzle Length, 1.74 NPR)core, 1.82 NPR)fan, 2.79 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # TT542

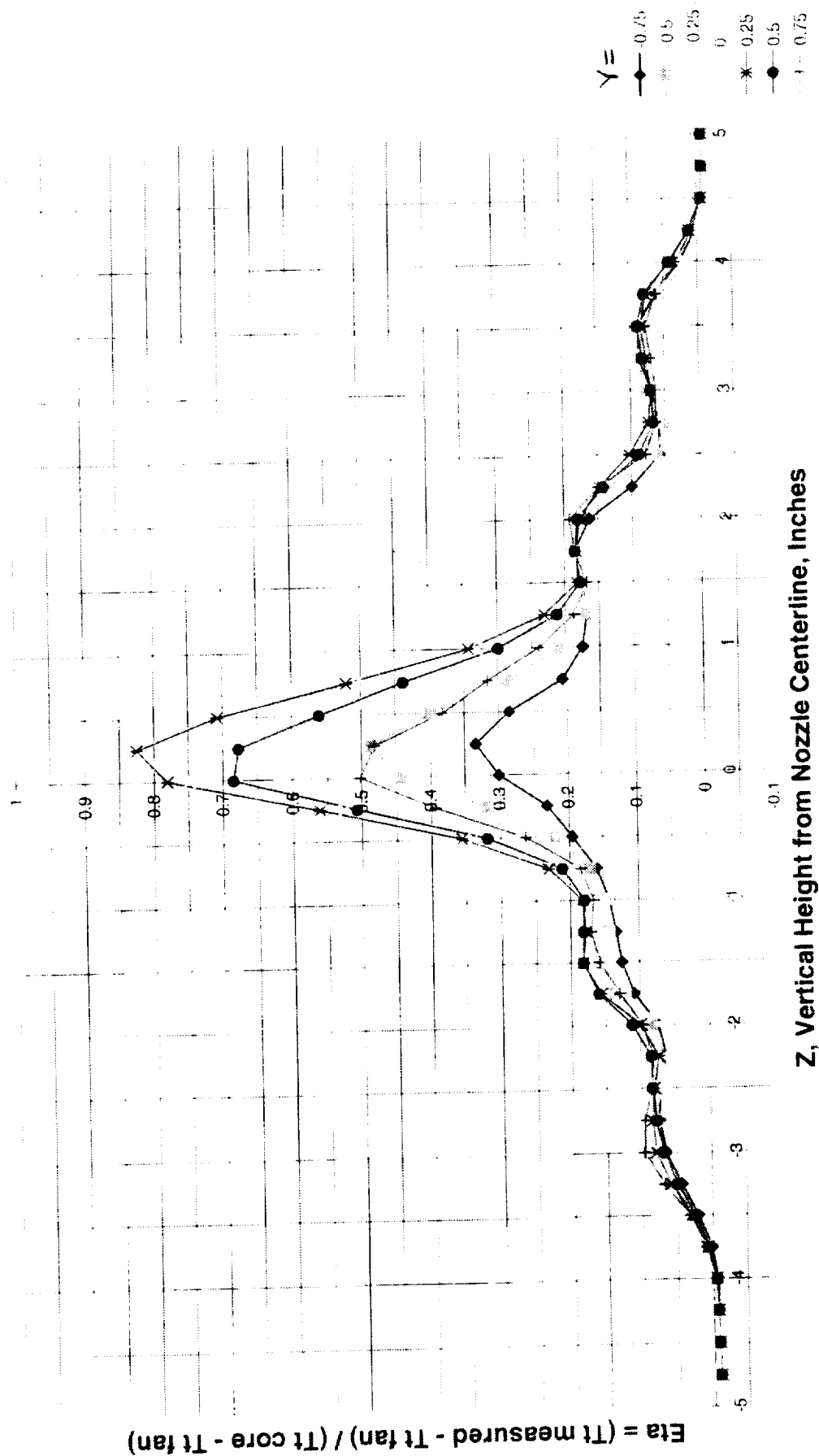


Figure 23 not available at time of printing.

FIGURE 24

Eta Distribution for 20L Deep Mixer at $x/D=0.2$, 100% Nozzle Length, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # TT550

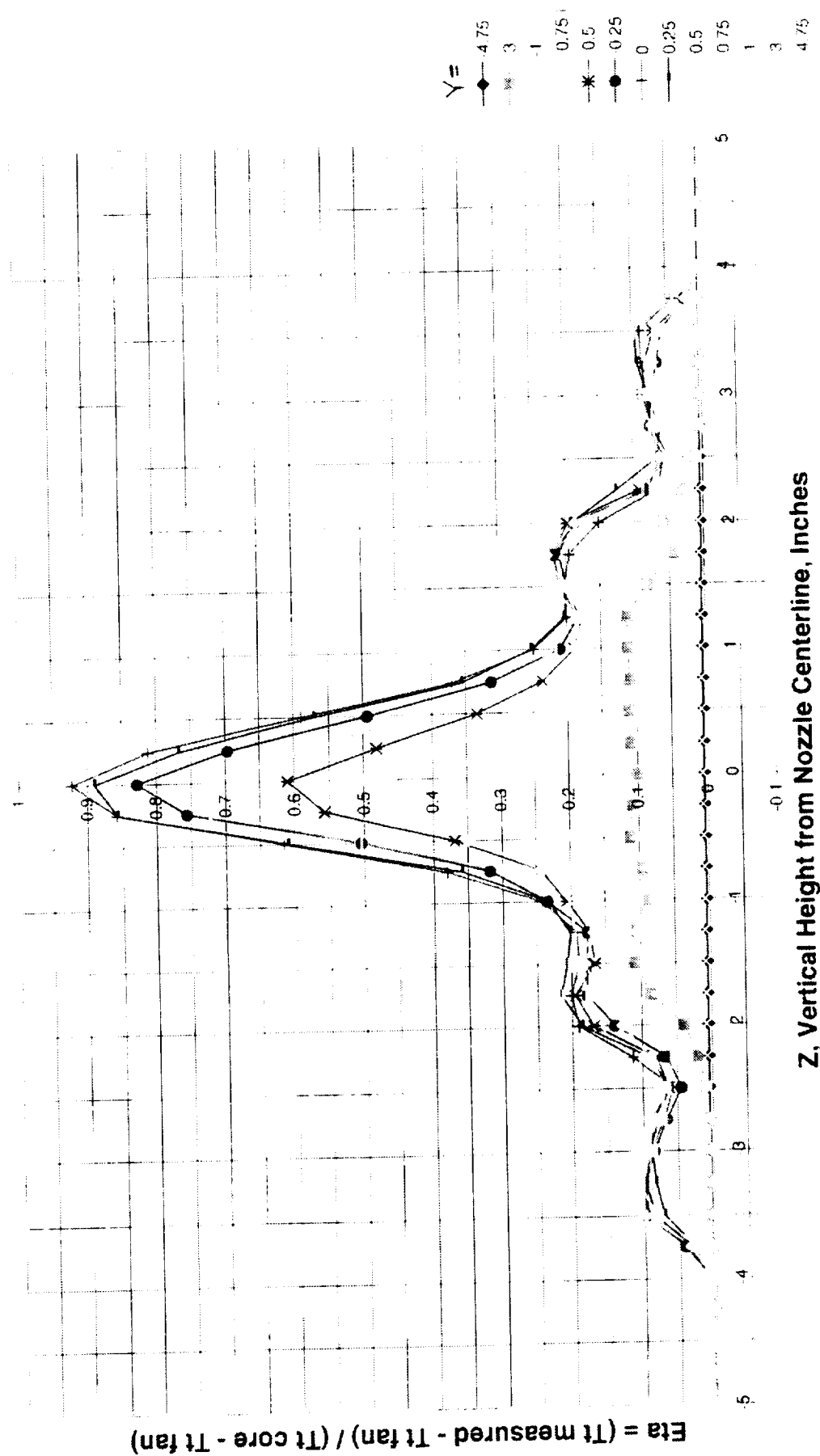


FIGURE 25

Eta Distribution for 20L Unscalloped Mixer at $x/D=0.2$, 100% Nozzle length, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan. 0.2 Mn)FS; 1996 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # TT609

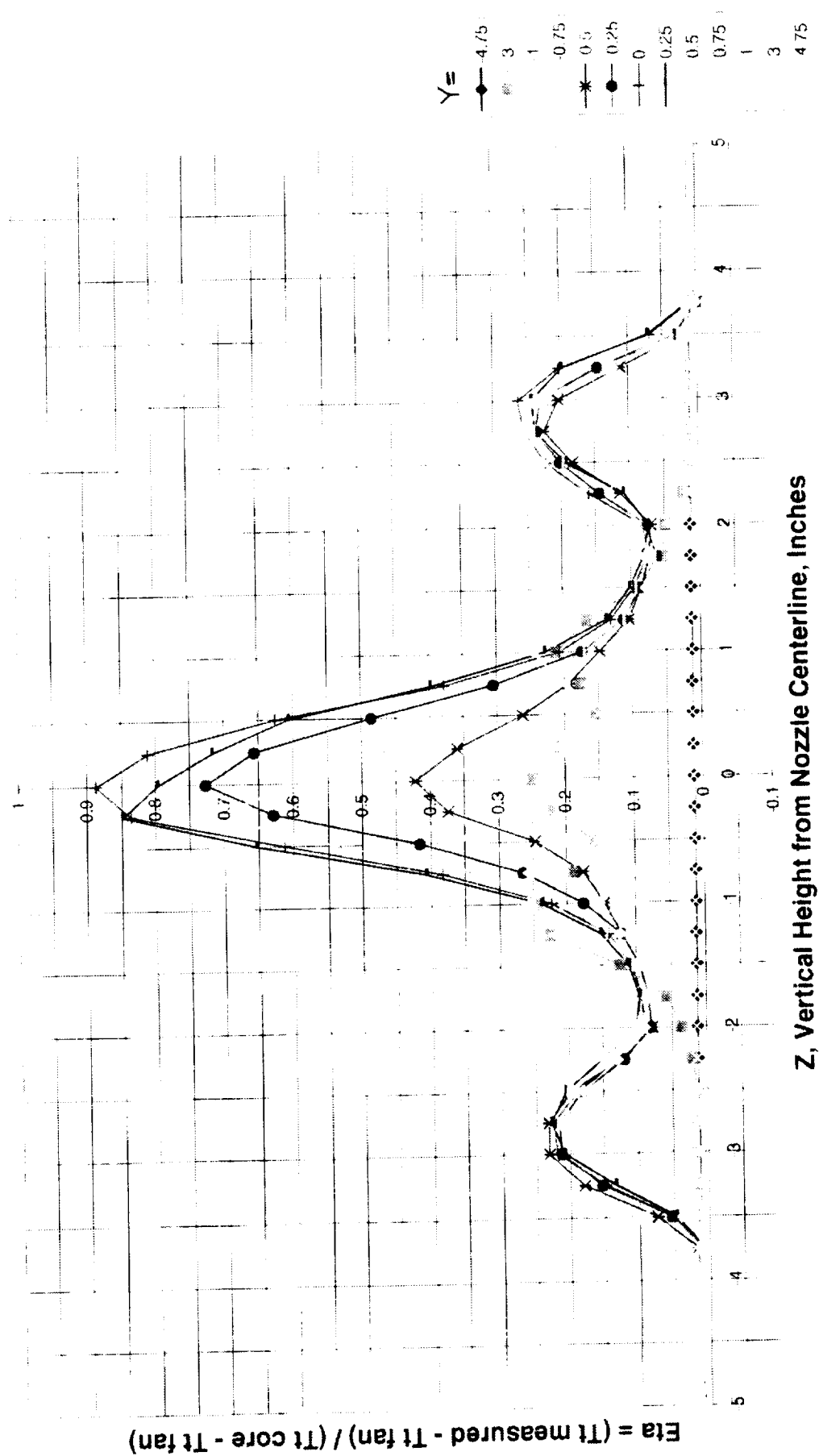


FIGURE 26

Max Centerline Eta at $x/D=0.5$ vs. Fan NPR for 20L Deep, Internal Tongue, and 12L Baseline Mixers; 1996 NASA-LeRC Acoustic Mixer / Plume Tests

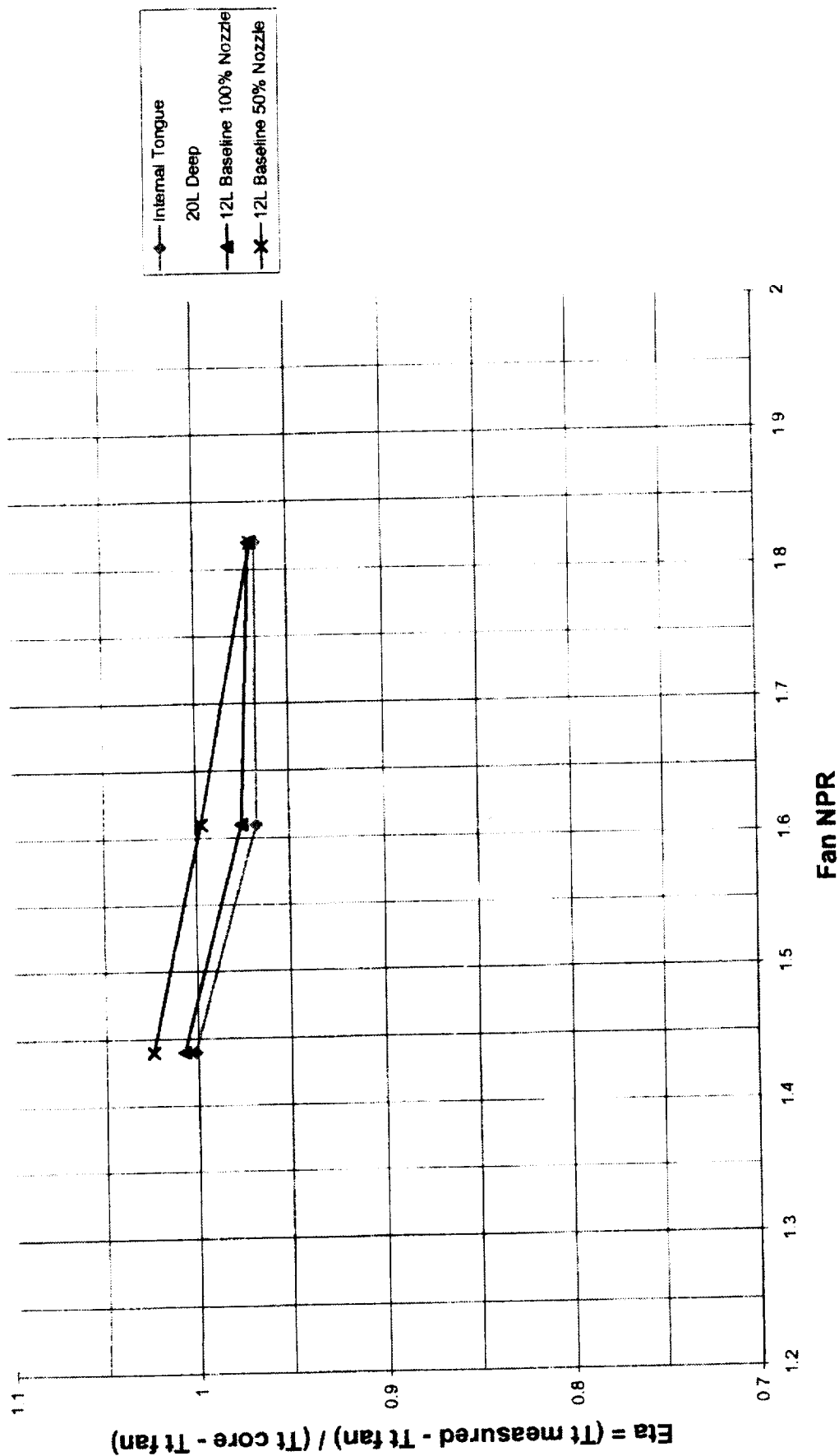


Figure 27(a). Confluent mixer Tt survey at $x/D=0.1$ at TO #1, $M(fj) = 0.1$. 1995 NASA-LeRc Test #T324

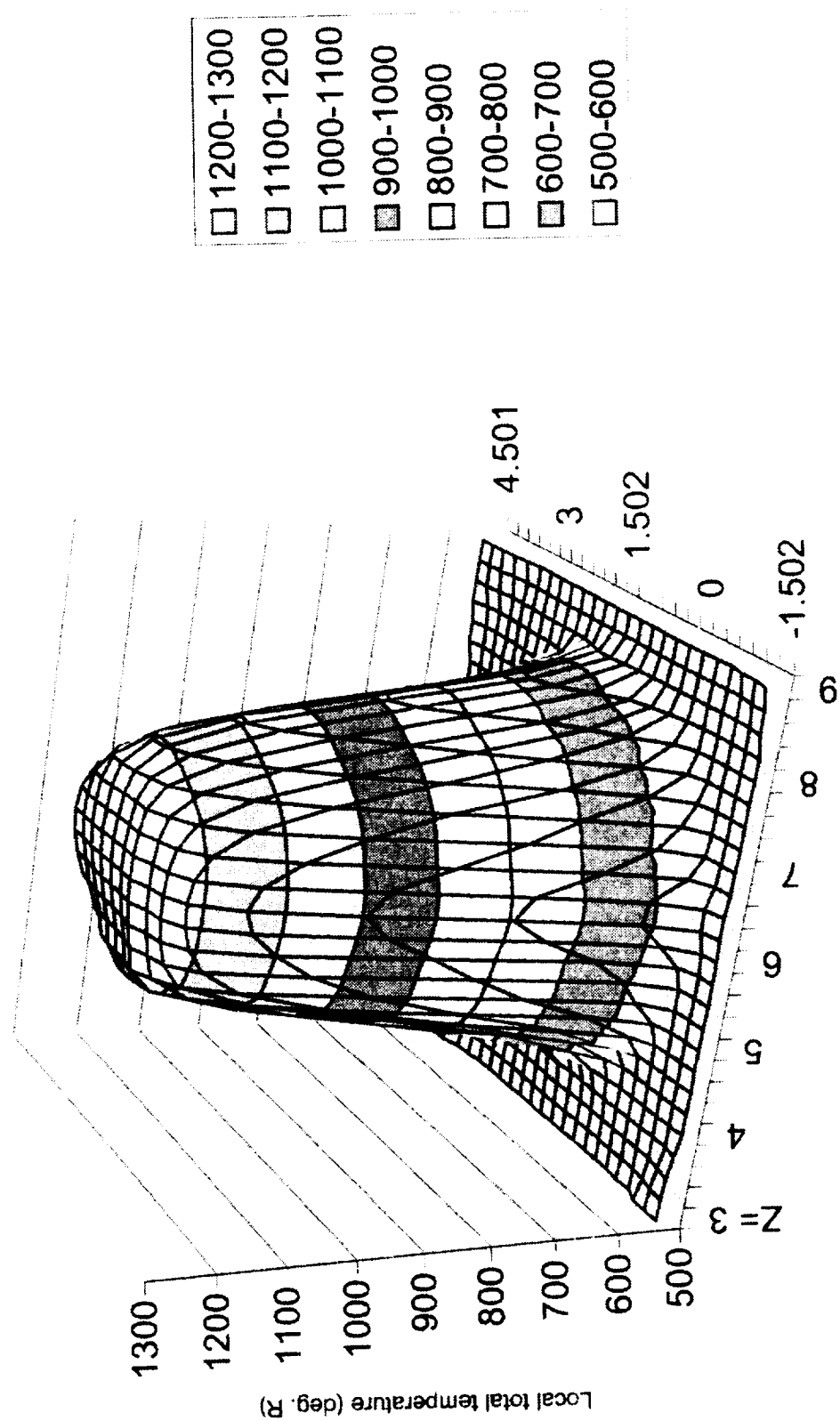


FIGURE 27 (b)

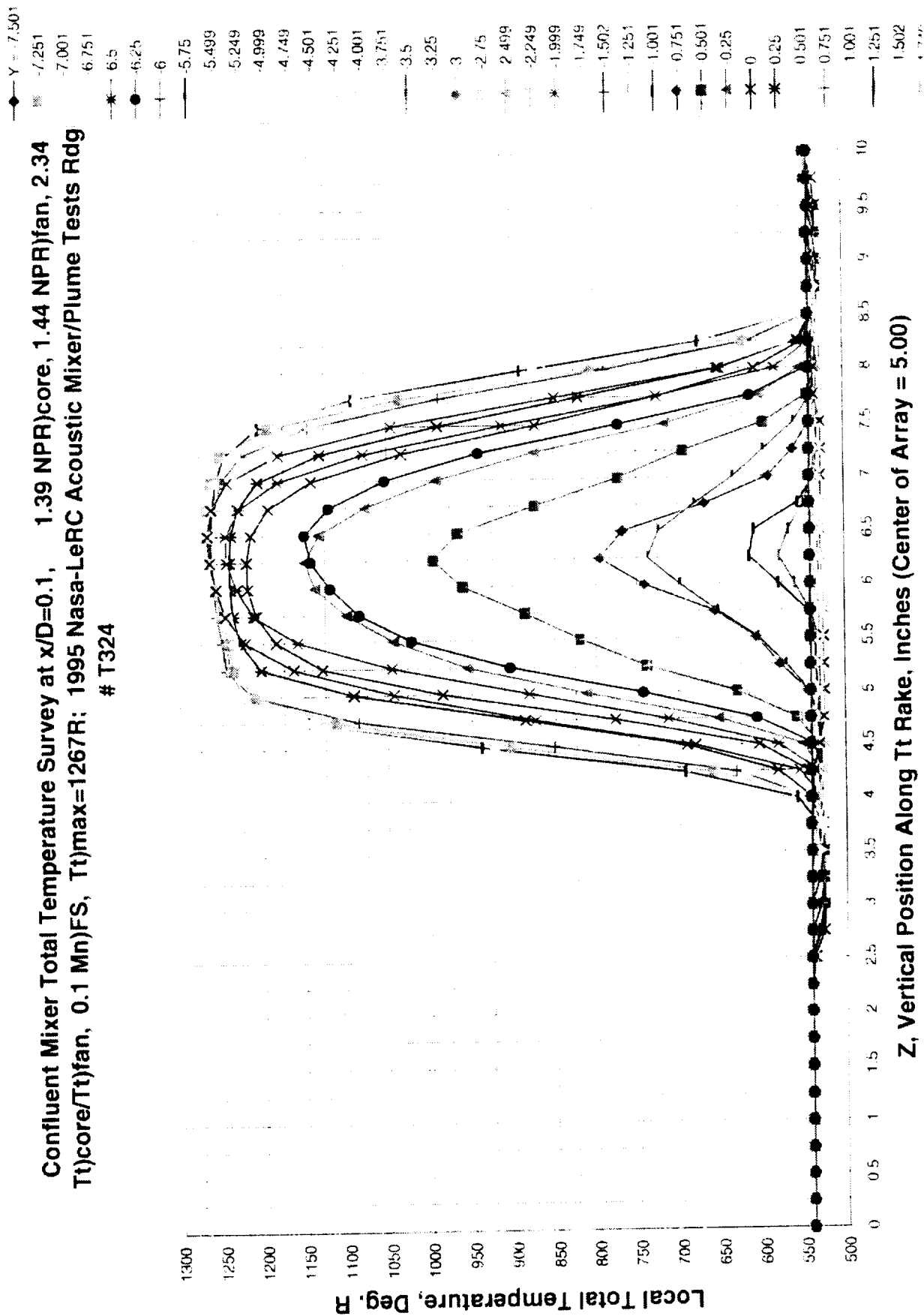


FIGURE 28

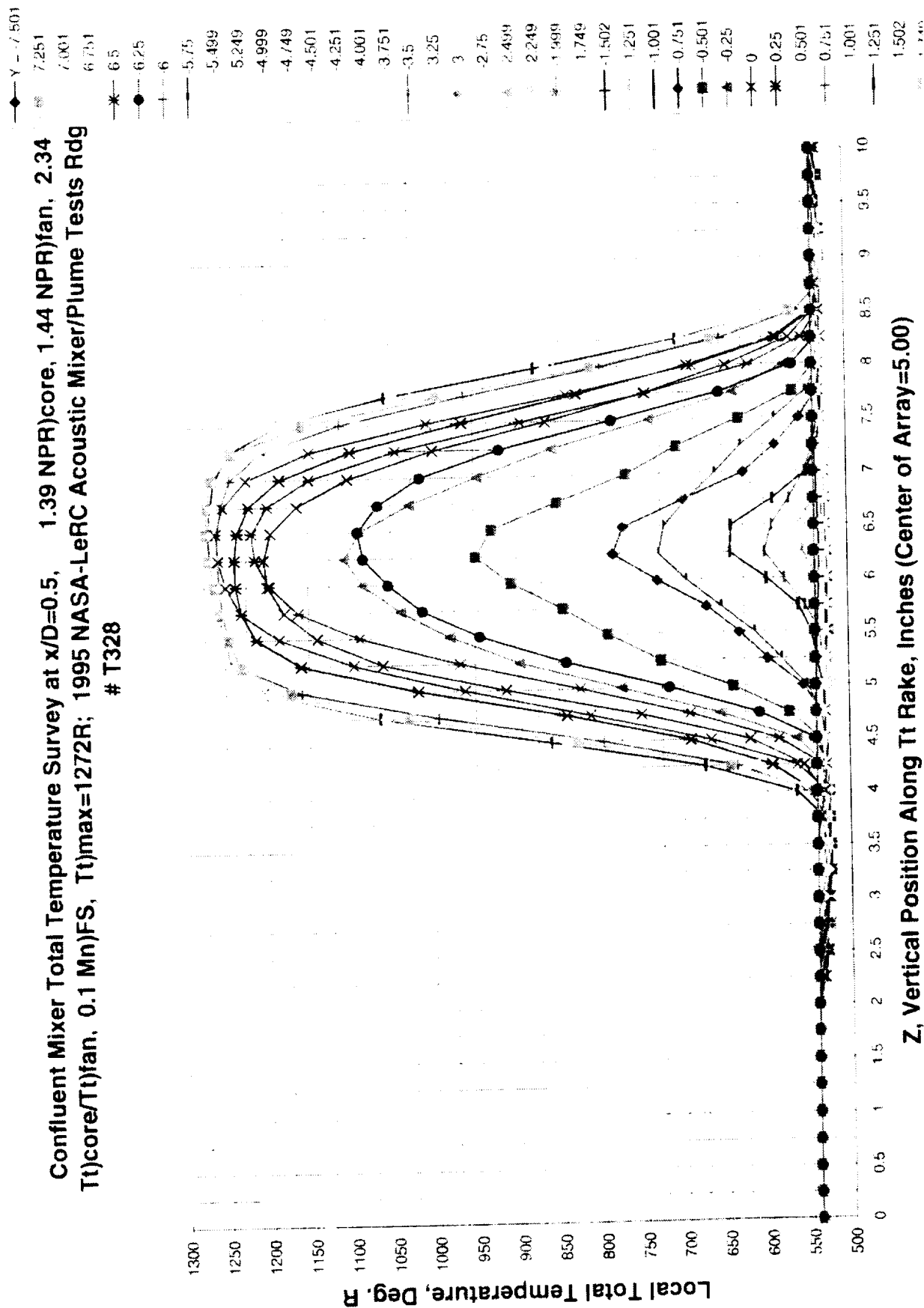


FIGURE 29

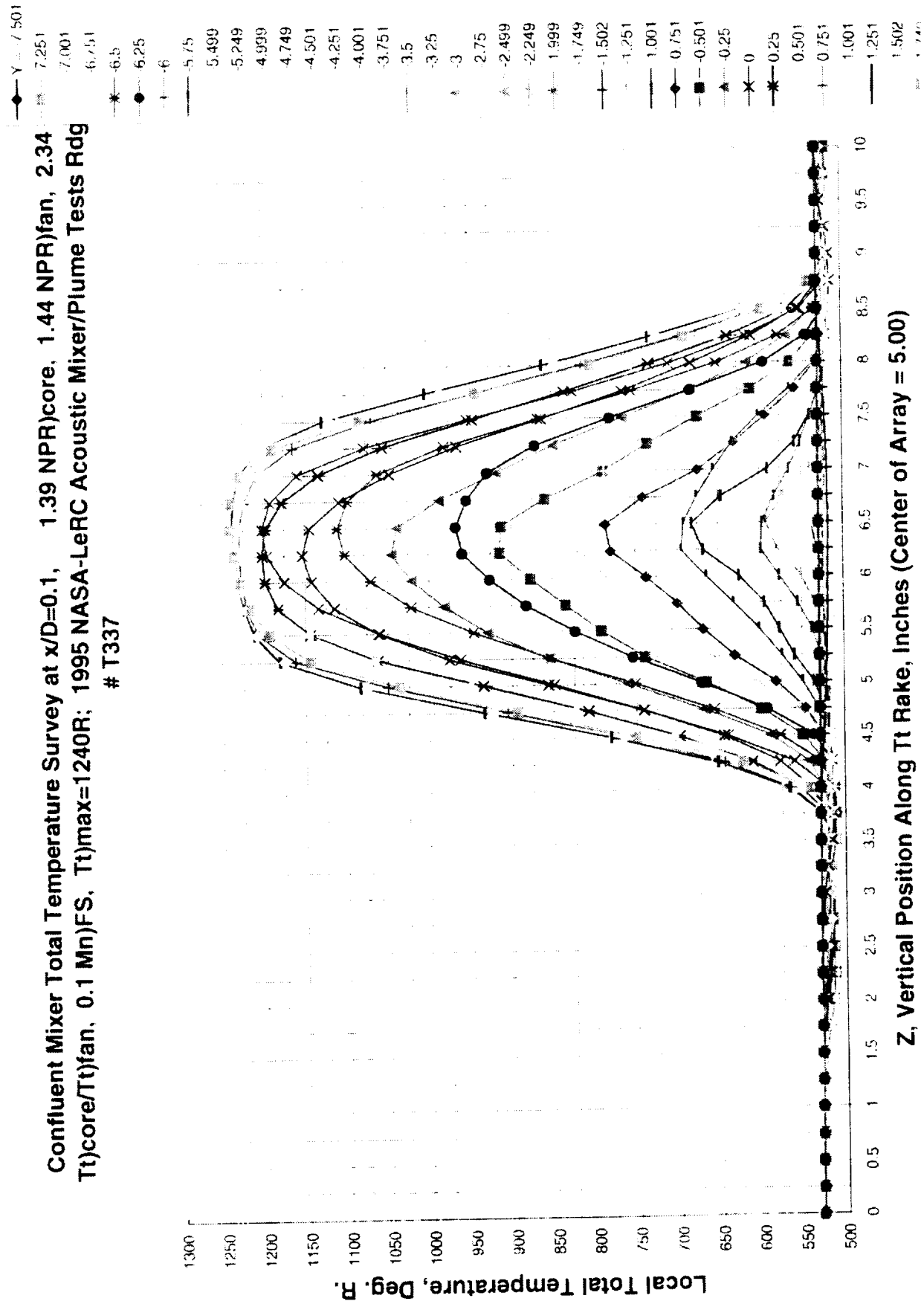


Figure 30(a). Confluent Mixer Total Temperature Survey at $x/D=4.0$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core Tt)fan, 0.1 Mn)FS, Tt)max=1152R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # T338

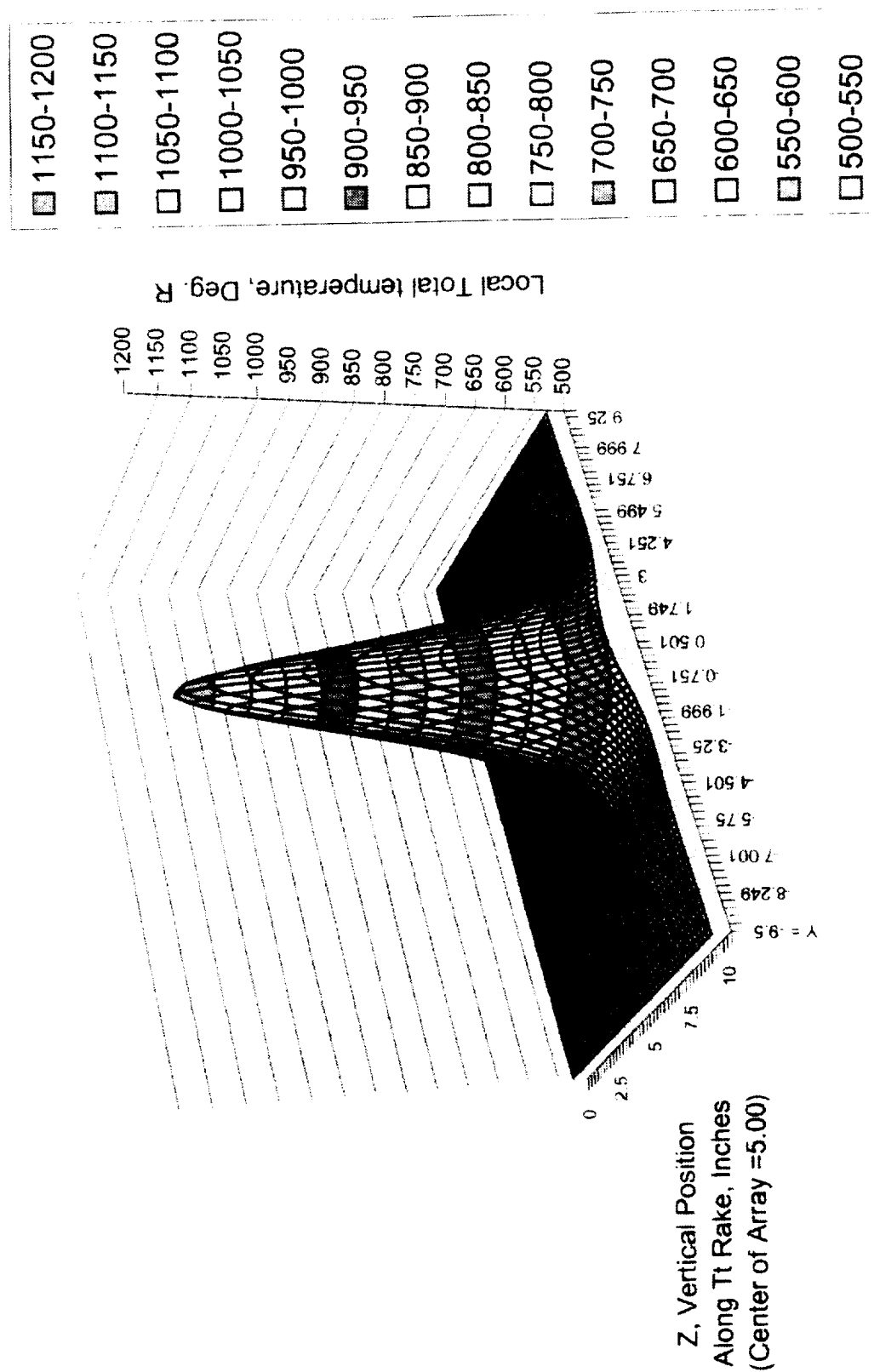


FIGURE 30 (b)

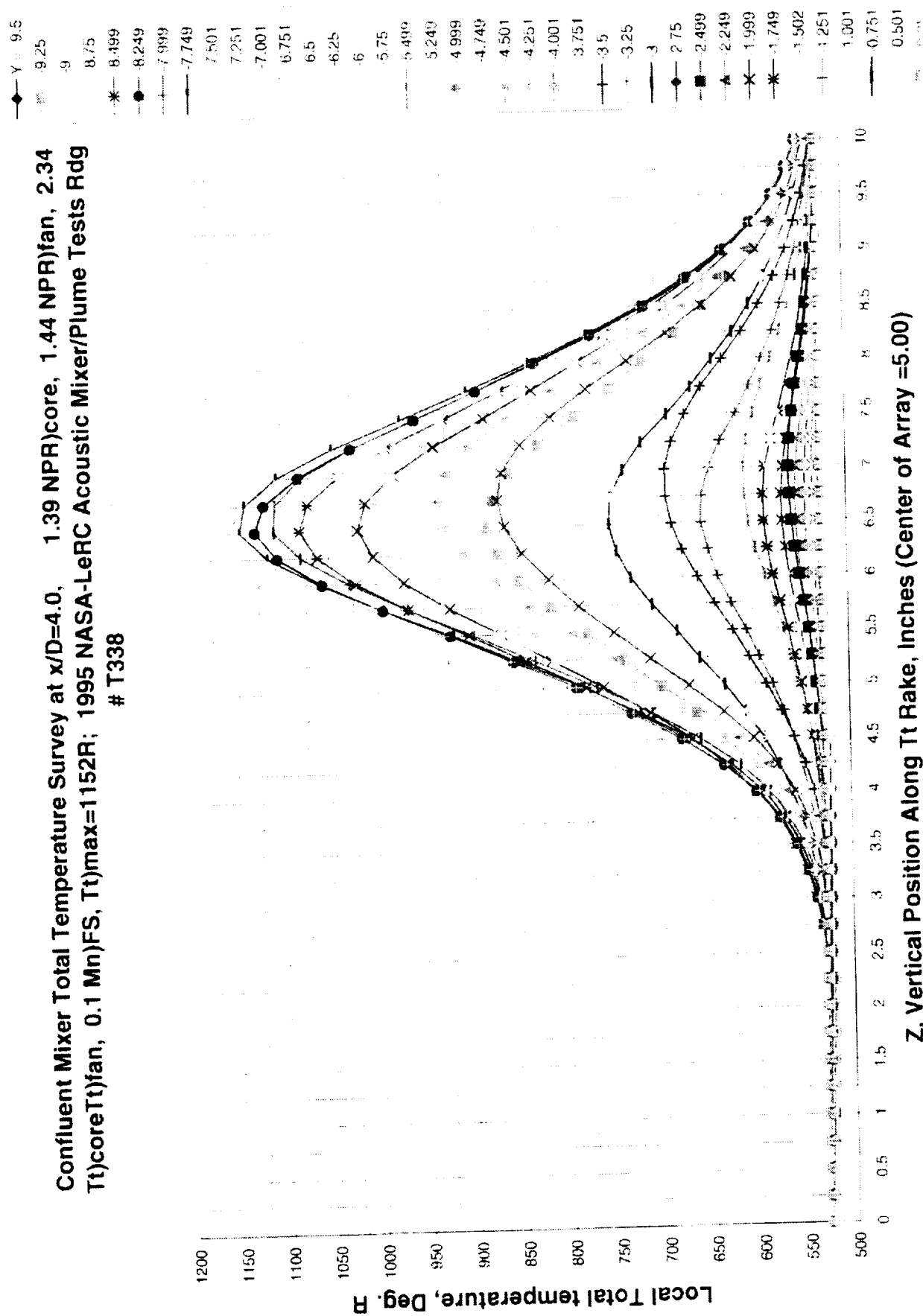


FIGURE 31

Confluent Mixer Total Temperature Survey at $x/D=4.0$, 1.39 NPR)core, 1.44 NPR)fan, 2.34
 Tt)core/Tt)fan, 0.3 Mn)FS, Tt)max = 1157R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests Rdg
 # T341

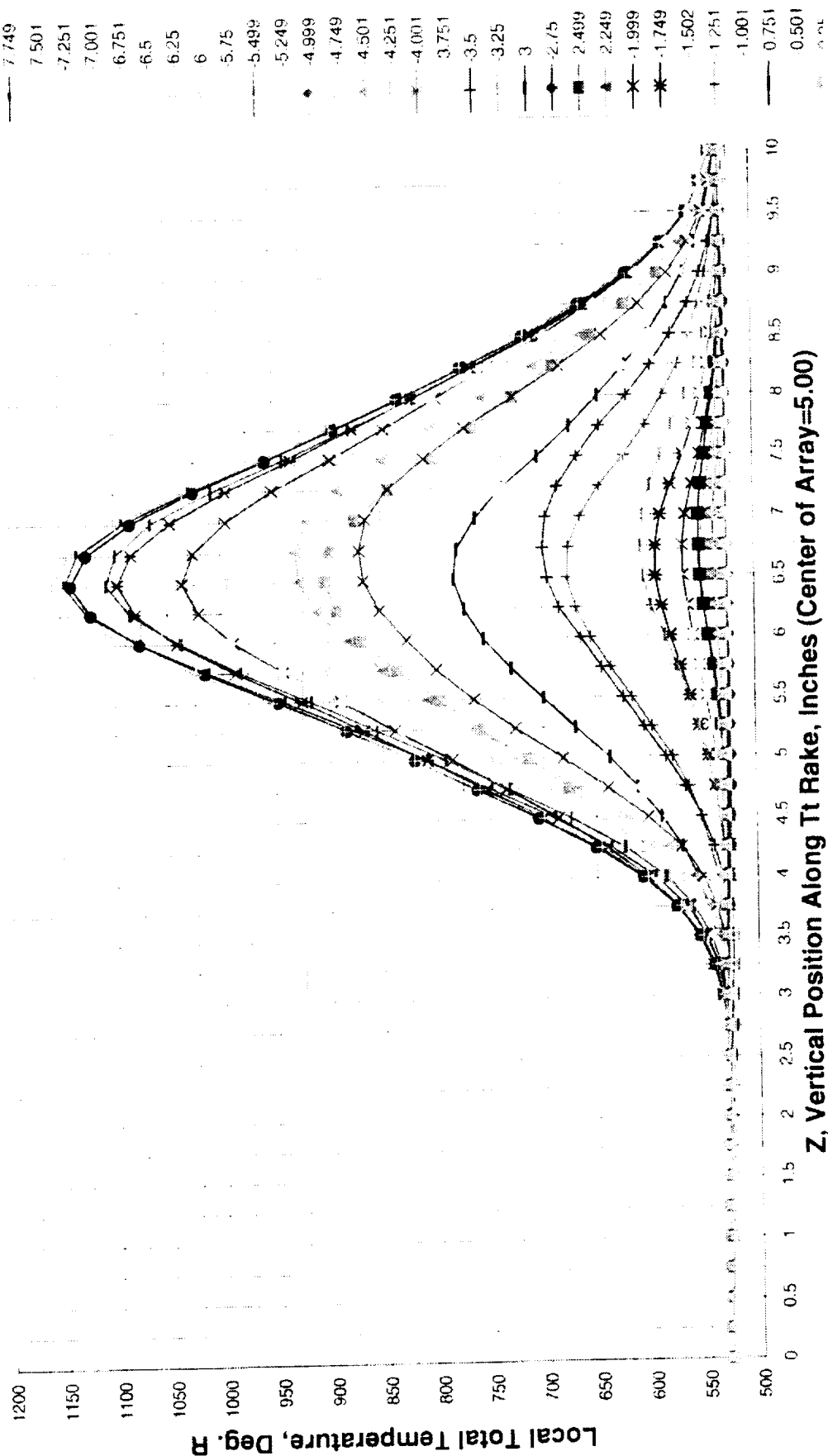


Figure 32(a). 12L Baseline (12CL) Mixer Total Temperature Survey at $x/D=0.1$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt(core/tt)fan, 0.1 Mn)FS, Tt)max=1230R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests, RDG # T355

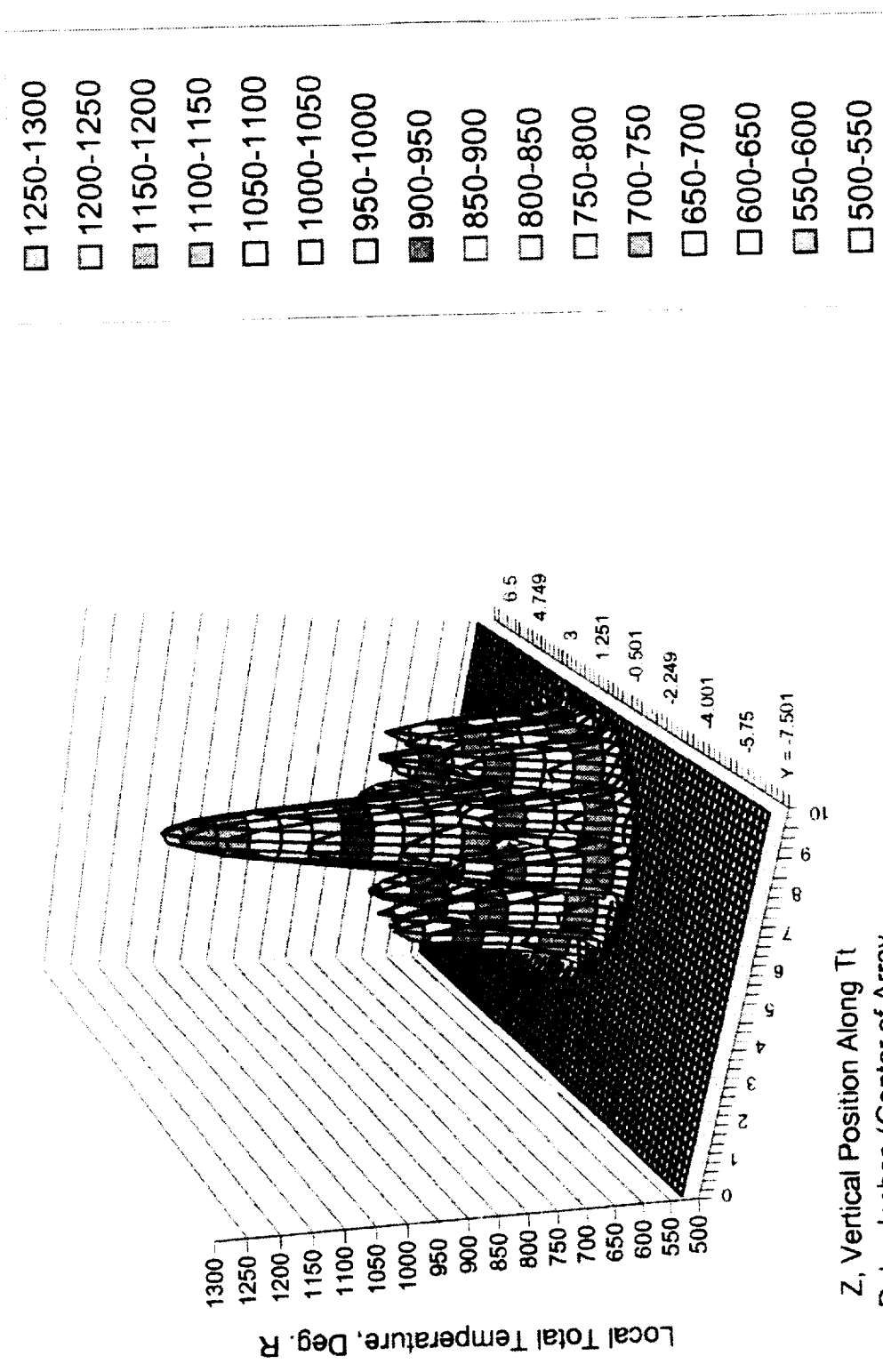


FIGURE 32 (b)

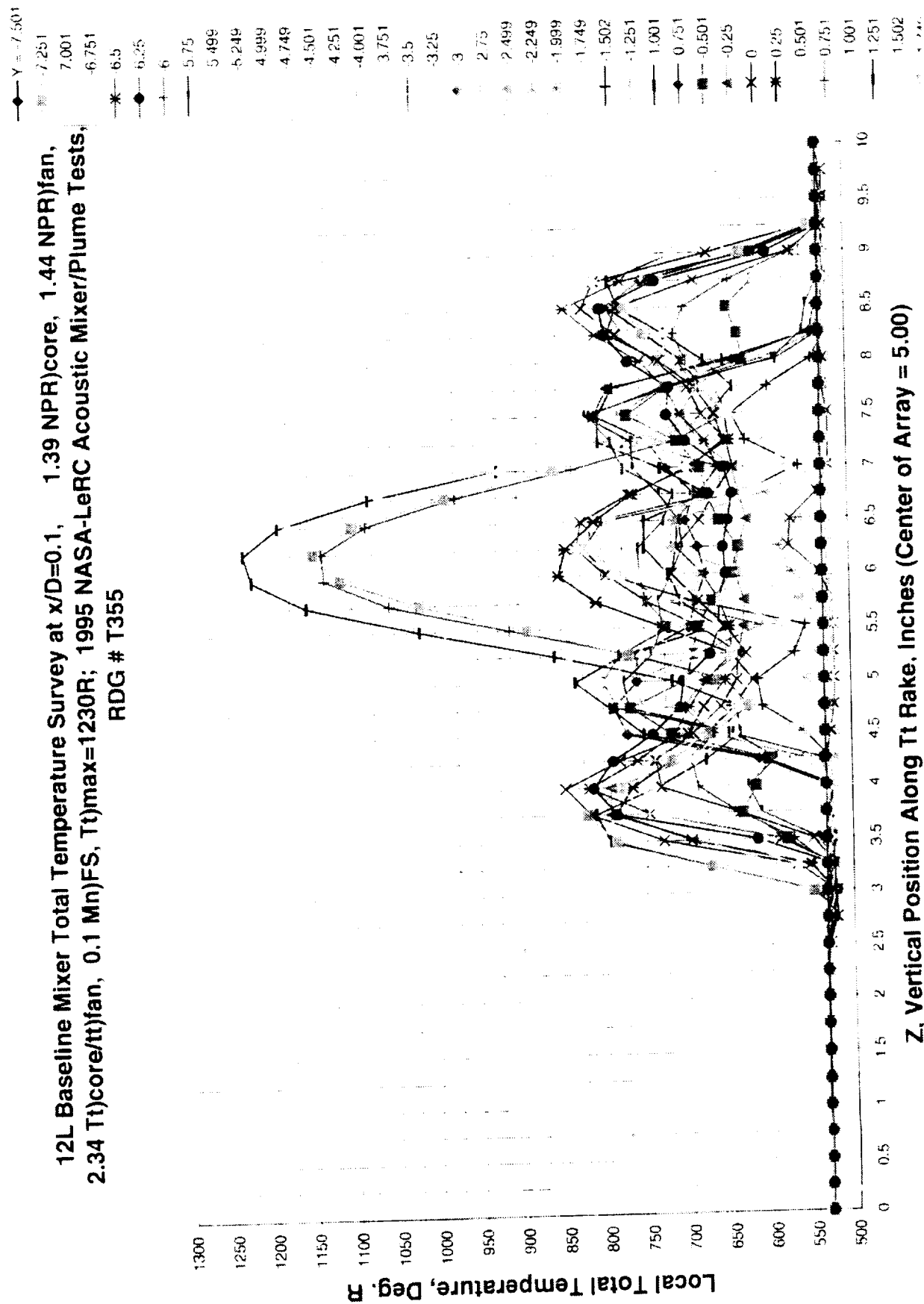


Figure 33(a). 12L Baseline (12CL) Mixer Total Temperature Survey at $x/D=0.5$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.3 Mn)FS, Tt)max = 1210R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # T361

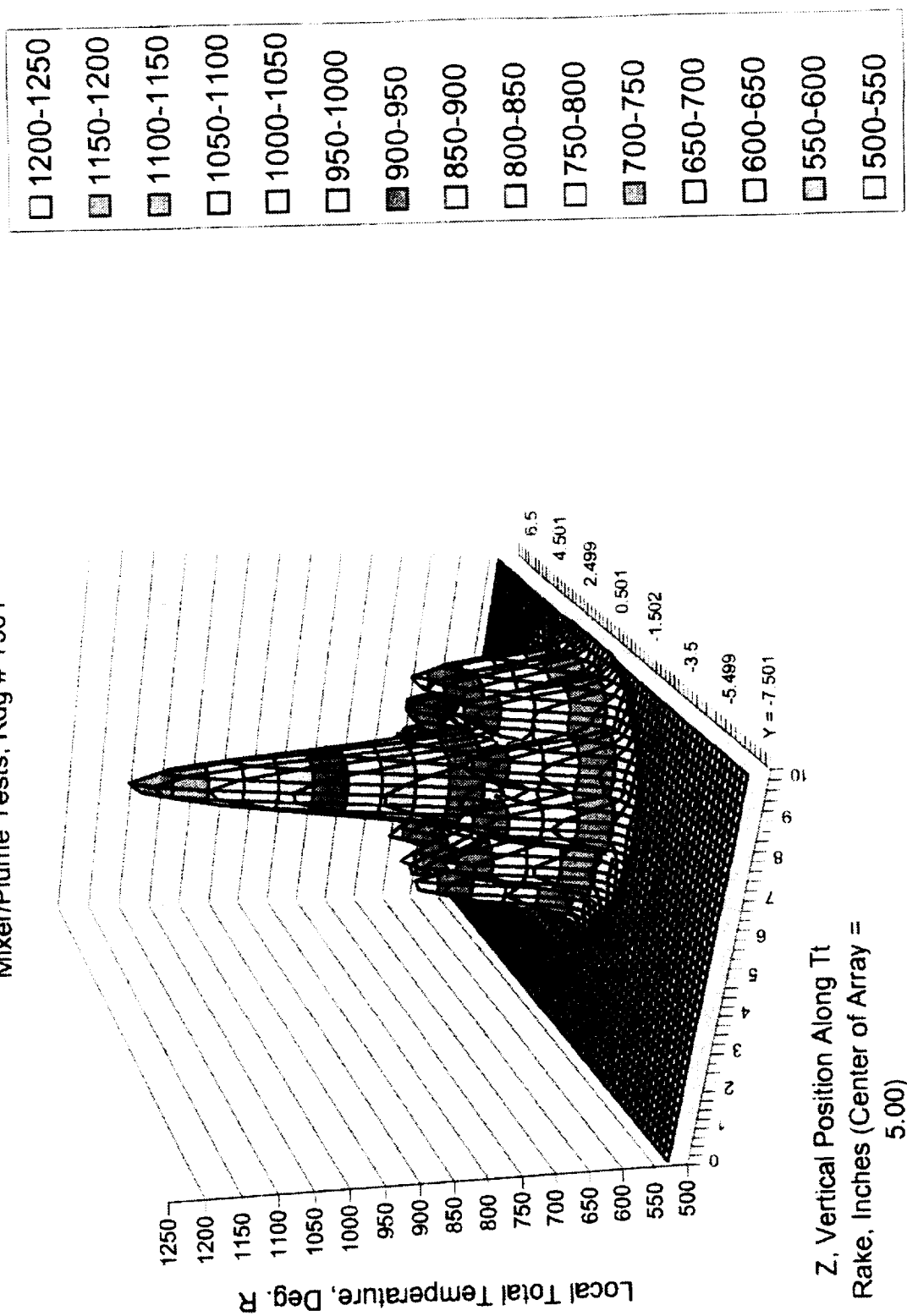


FIGURE 33 (b)

12L Baseline Mixer Total Temperature Survey at $x/D=0.5$, 1.39 NPR)core, 1.44 NPR)fan,
 2.34 Tt)core/Tt)fan, 0.3 Mn)FS, Tt)max = 1210R; 1995 NASA-LeRC Acoustic Mixer/Plume
 Tests, Rdg # T361

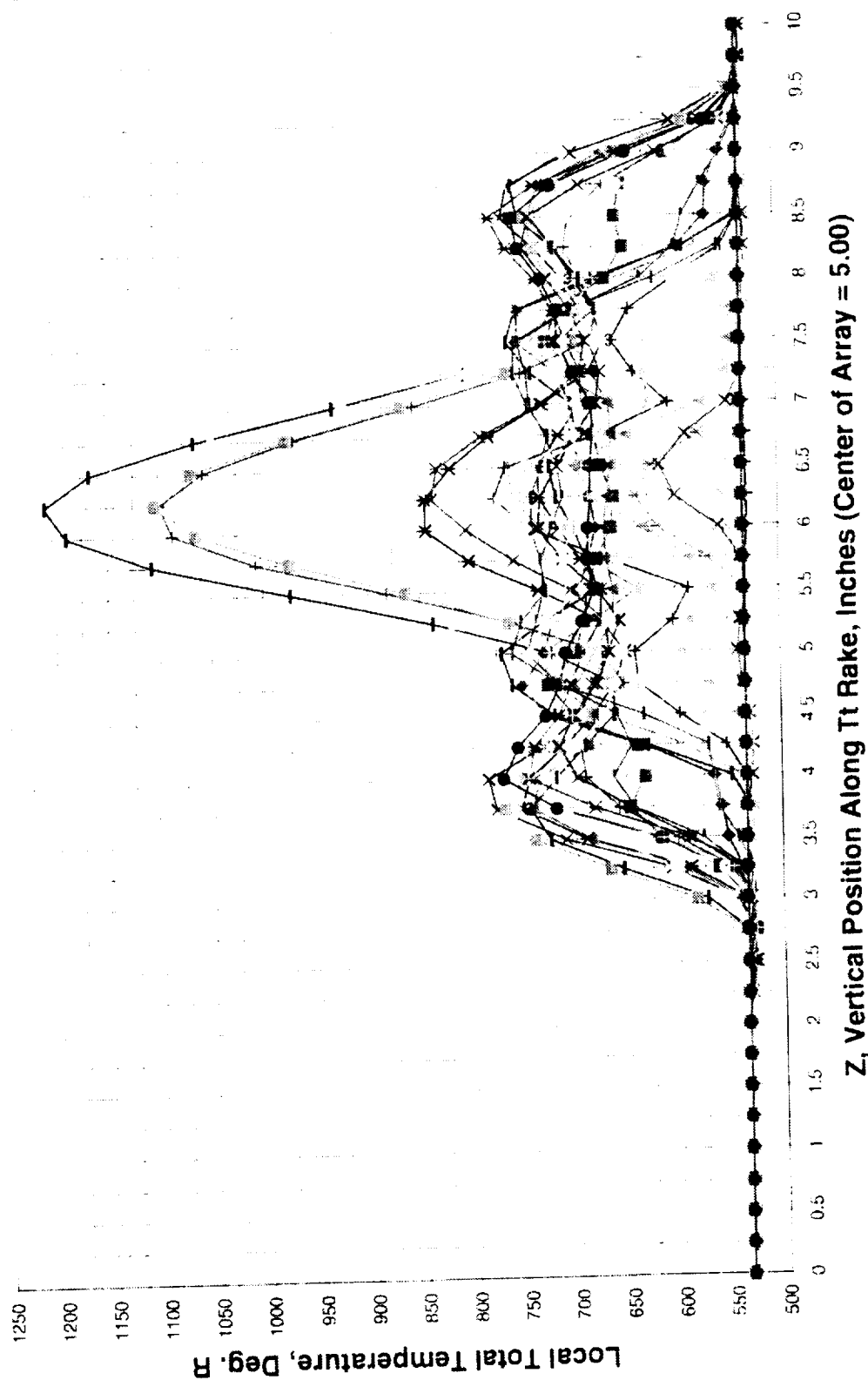
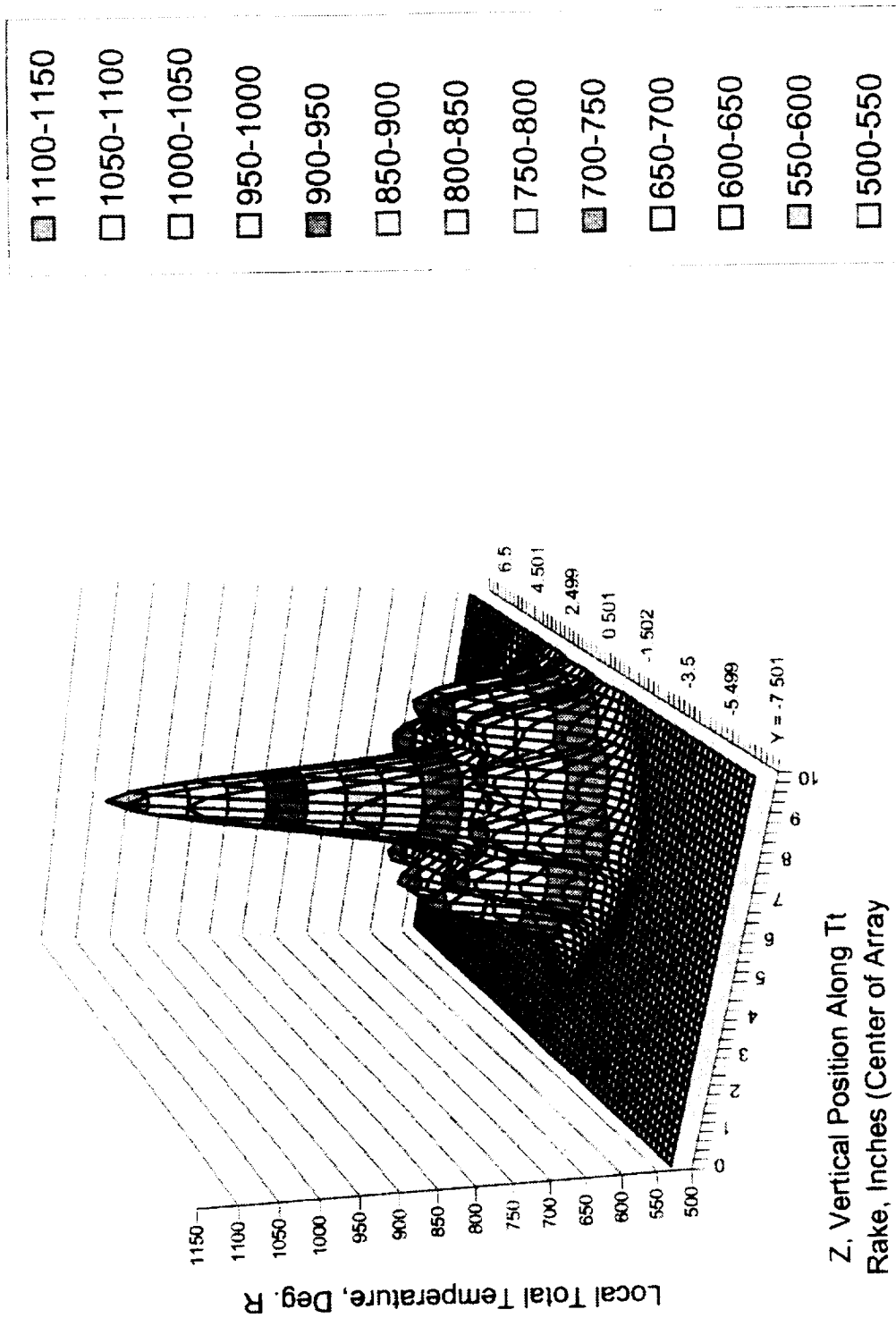


Figure 34(a). 12L Baseline (12CL) Mixer Total Temperature Survey at $x/D=1.0$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.1 Mn)FS, Tt)max = 1149R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # T365



Z, Vertical Position Along Tt
Rake, Inches (Center of Array
= 5.00)

FIGURE 34 (b)

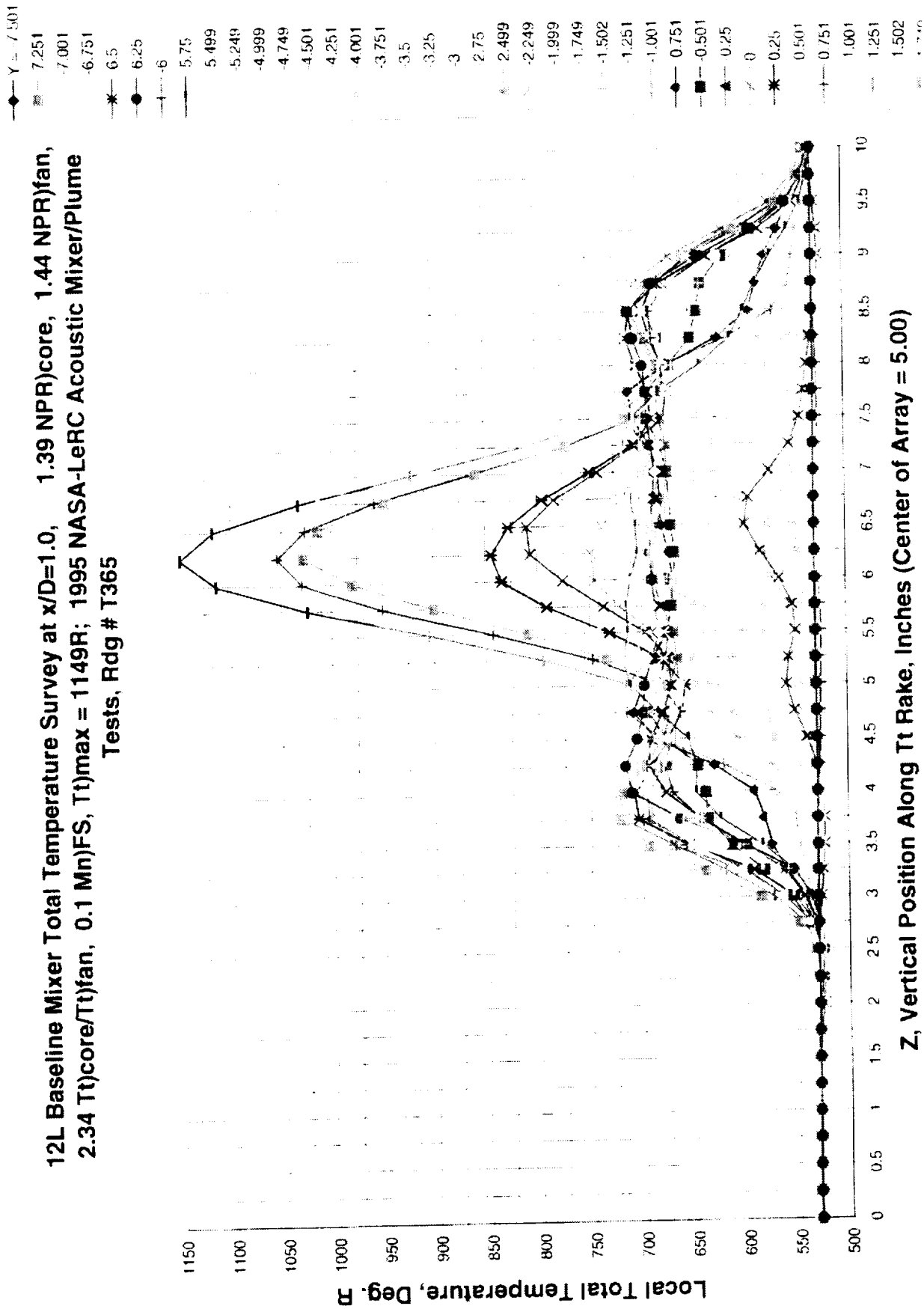


Figure 35(a). 12L Baseline (12CL) Mixer Total Temperature Survey at $x/D=4.0$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.1 Mn)FS, Tt)max = 866R; 1995 NASA-LeRC Acoustic Mixer/PLume Tests, Rdg # T367

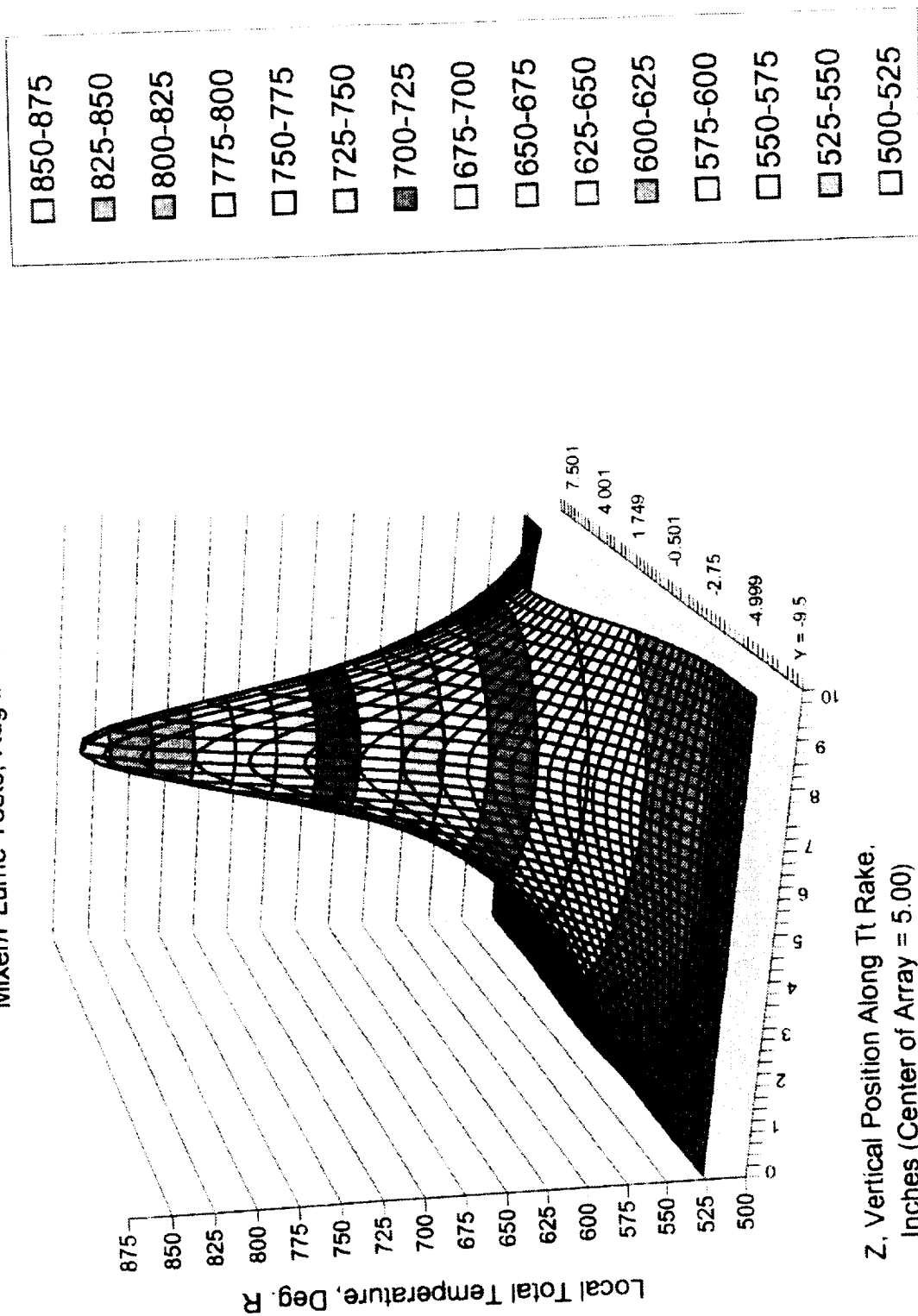


FIGURE 35 (b)

12L Baseline Mixer Total Temperature Survey at $x/D=4.0$, 1.39 NPR)core, 1.44 NPR)fan,
 2.34 Tt)core/Tt)fan, 0.1 Mn)FS, Tt)max = 866R; 1995 NASA-LeRC Acoustic Mixer/Plume
 Tests, Rdg # T367

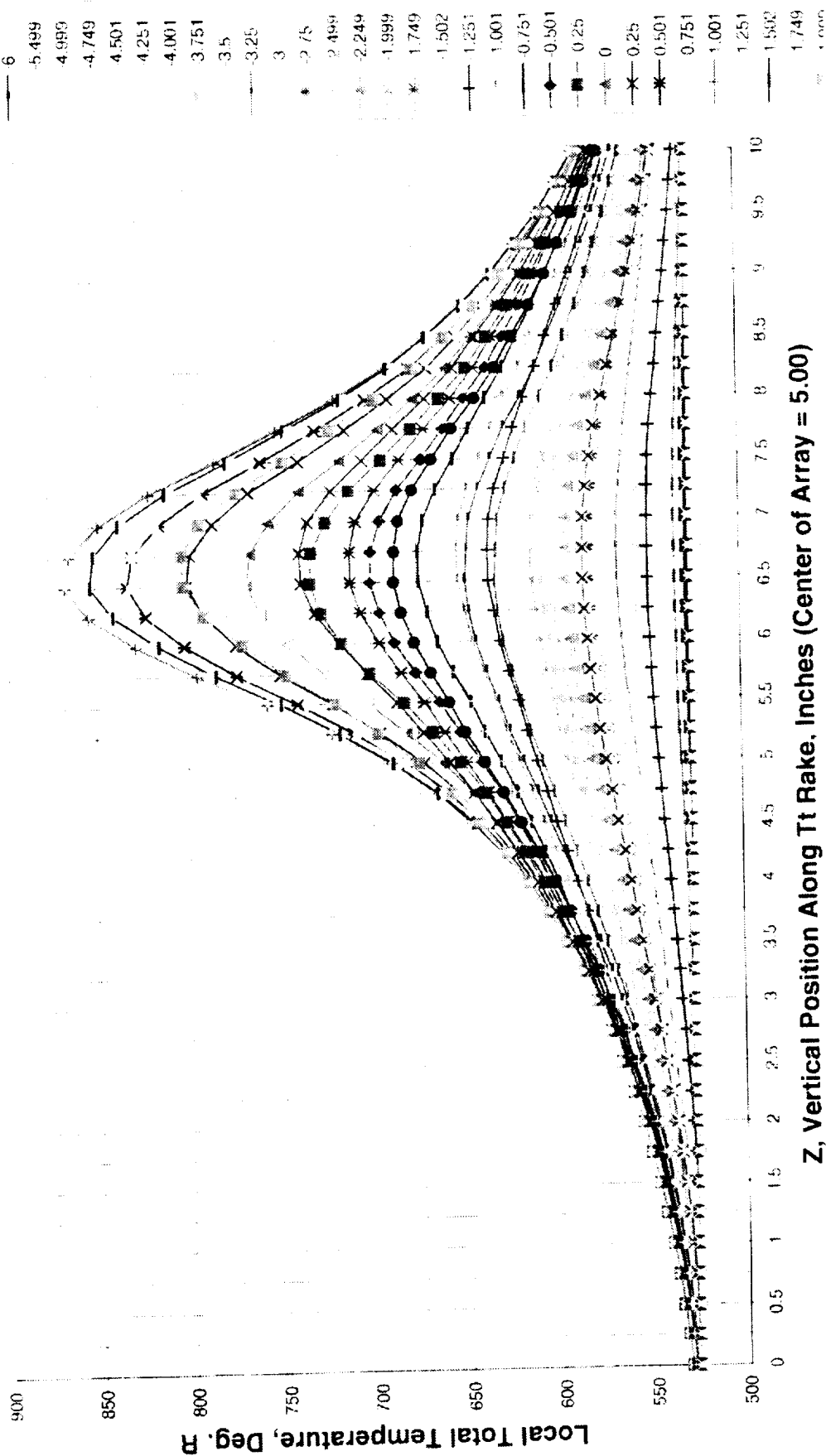


FIGURE 36

12L Baseline Mixer Total Temperature Survey at $x/D=0.5$, 1.39 NPR)core, 1.44 NPR)fan, 2.37 Tt)core/Tt)fan, 0.2 MN(FS; 1996-97 NASA LeRC Acoustic Mixer/Plume Tests - Rdg # TT564

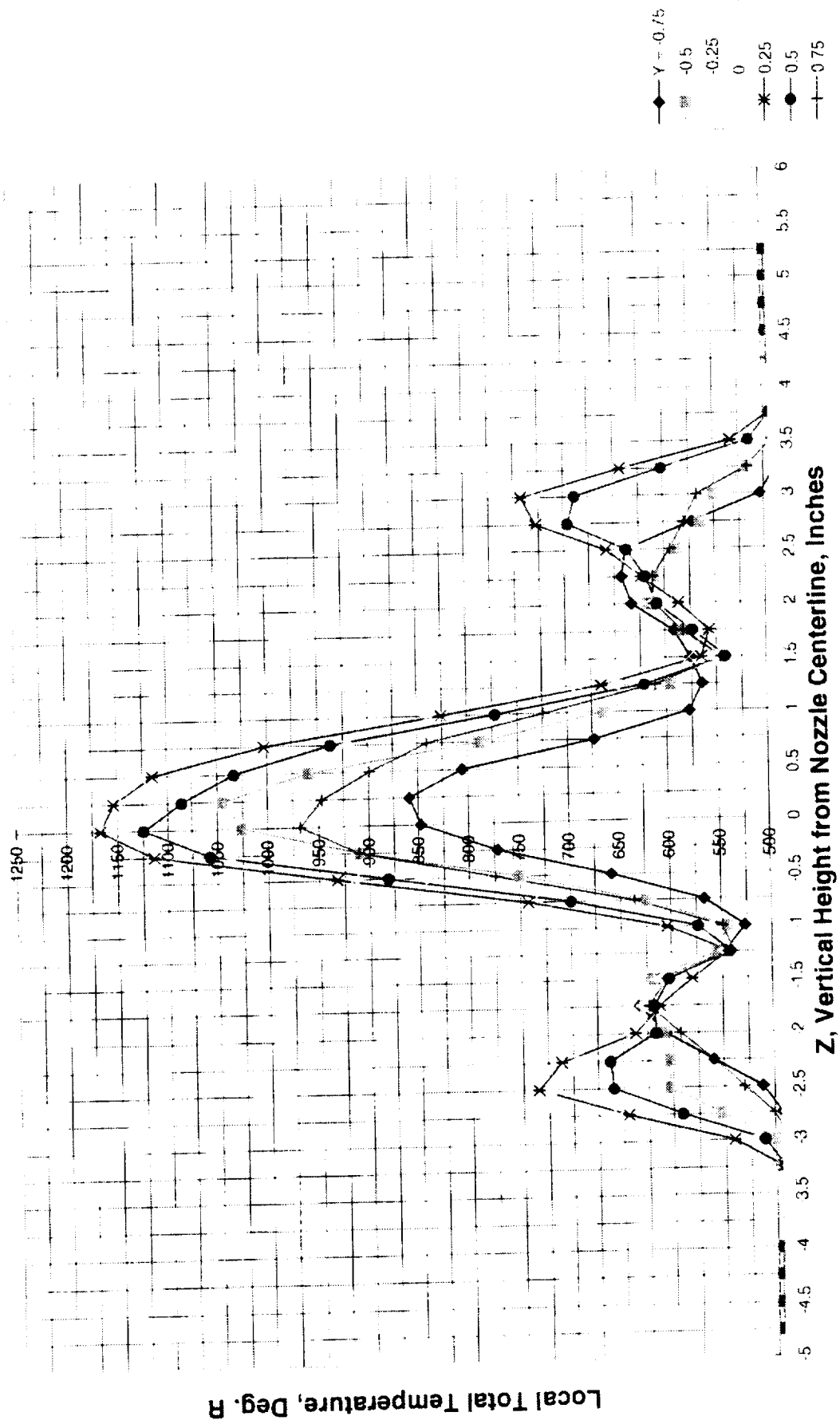


Figure 37(a). 12L Advanced Mixer (12UH) Total Temperature Survey at $x/D=0.1$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.1 Mn)FS; Tt)max = 1145R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # T409

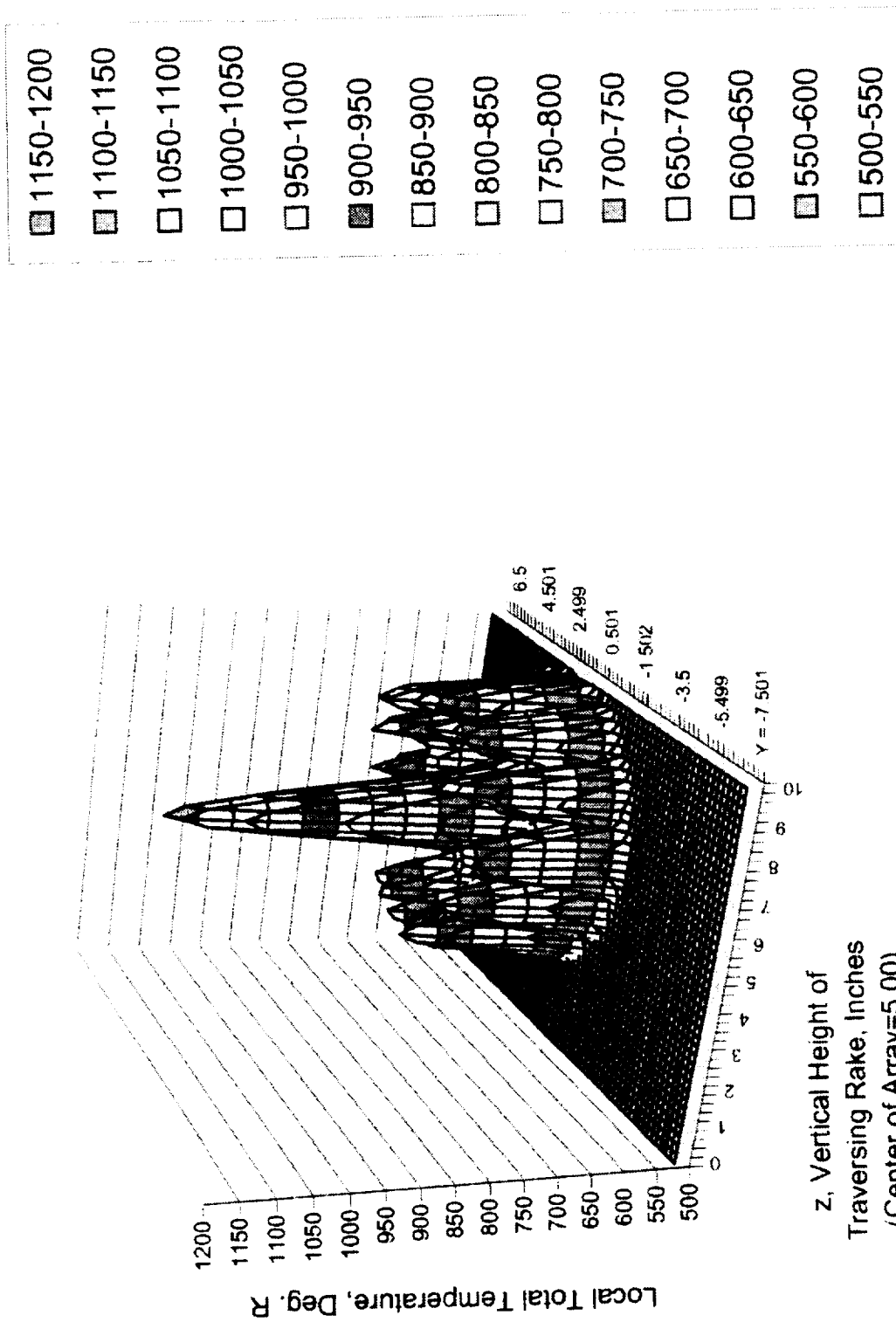


FIGURE 37(b)

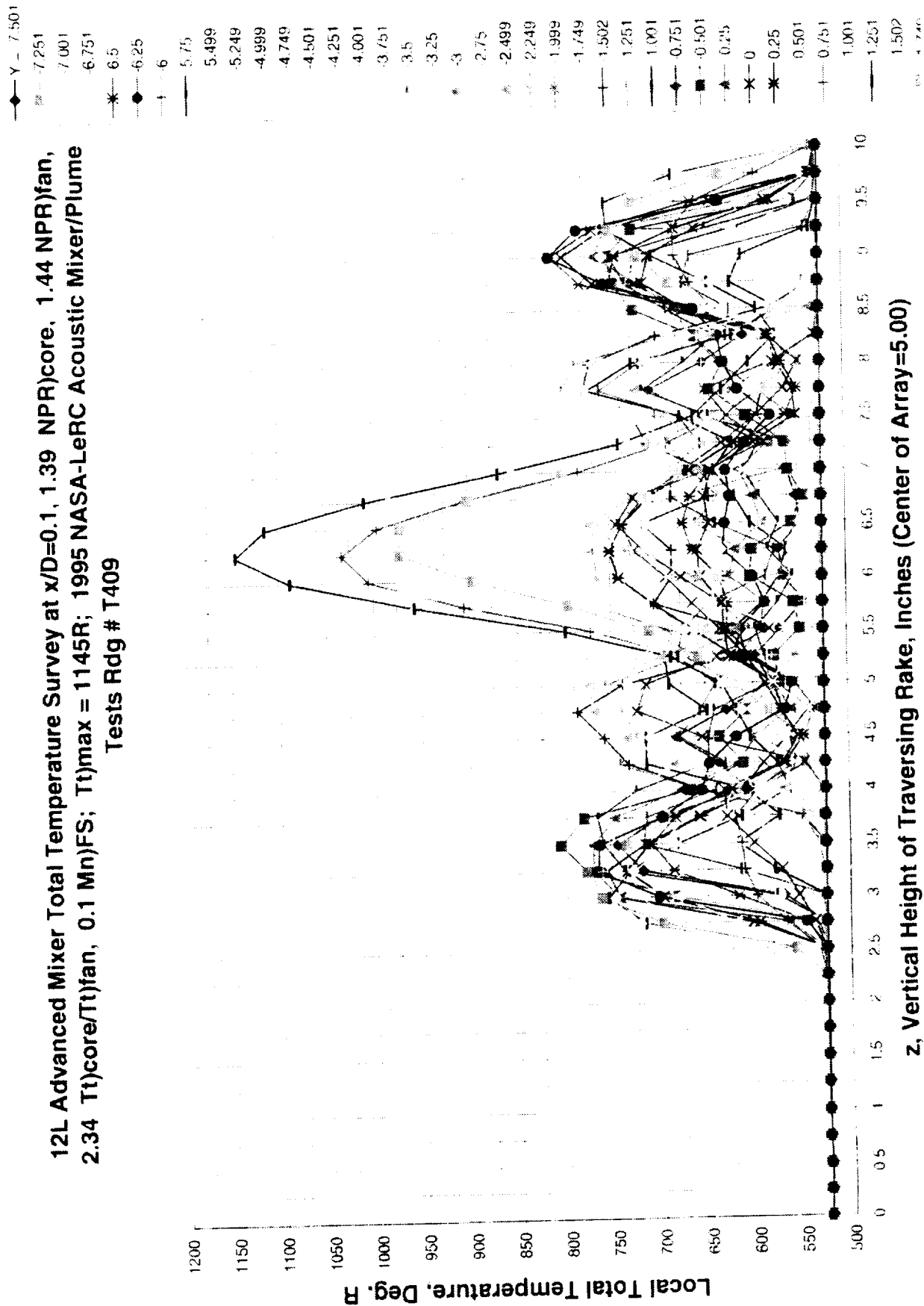
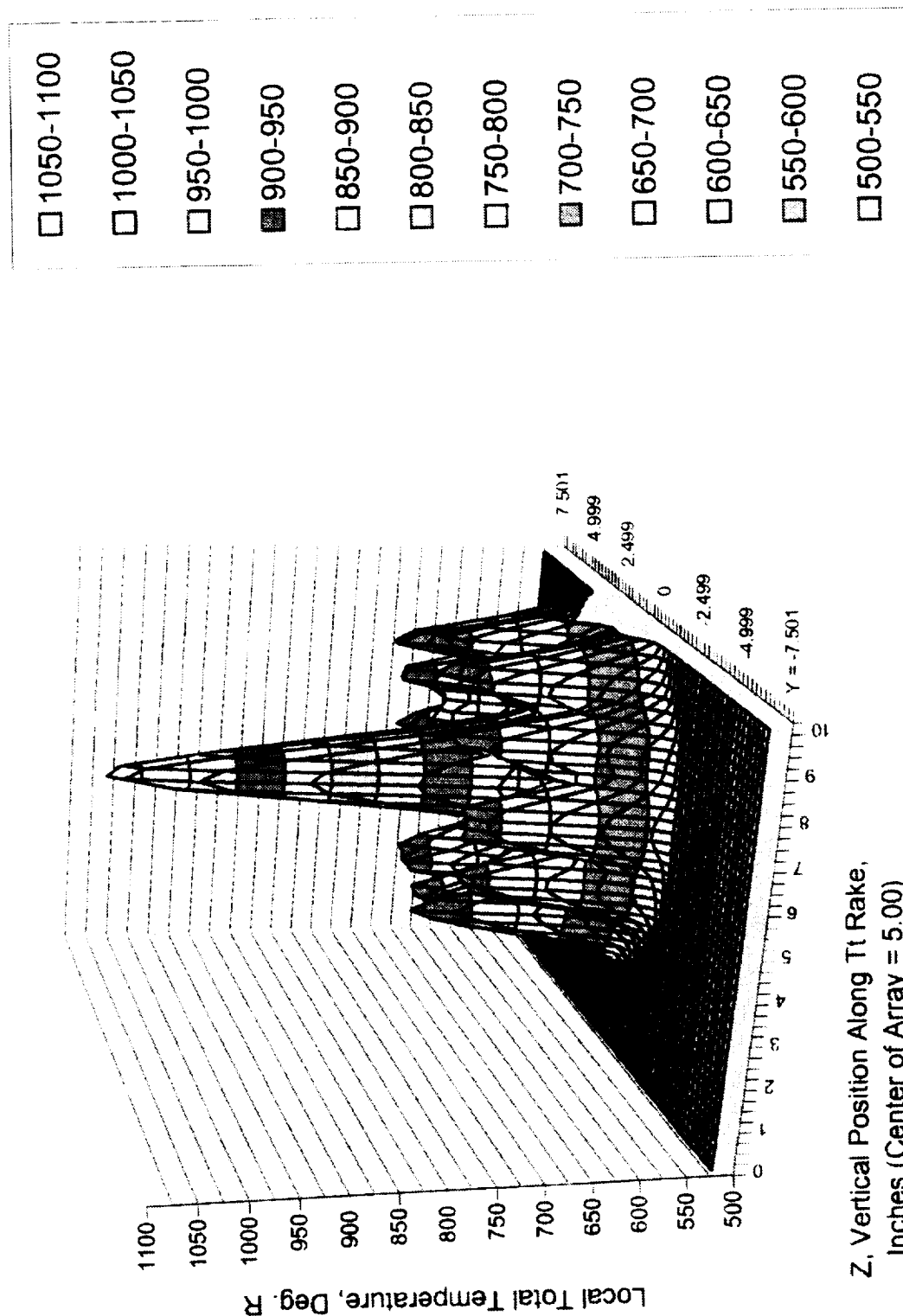


Figure 38(a). 12L Advanced Mixer (12UH) Total Temperature Survey at $x/D=0.5$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.5 Mn)FS, Tt)max=1084R; 1995 NASA-LeRC Acoustic Mixer/Plume Testing Rdg # T410



Z, Vertical Position Along Tt Rake,
Inches (Center of Array = 5.00)

FIGURE 38 (b)

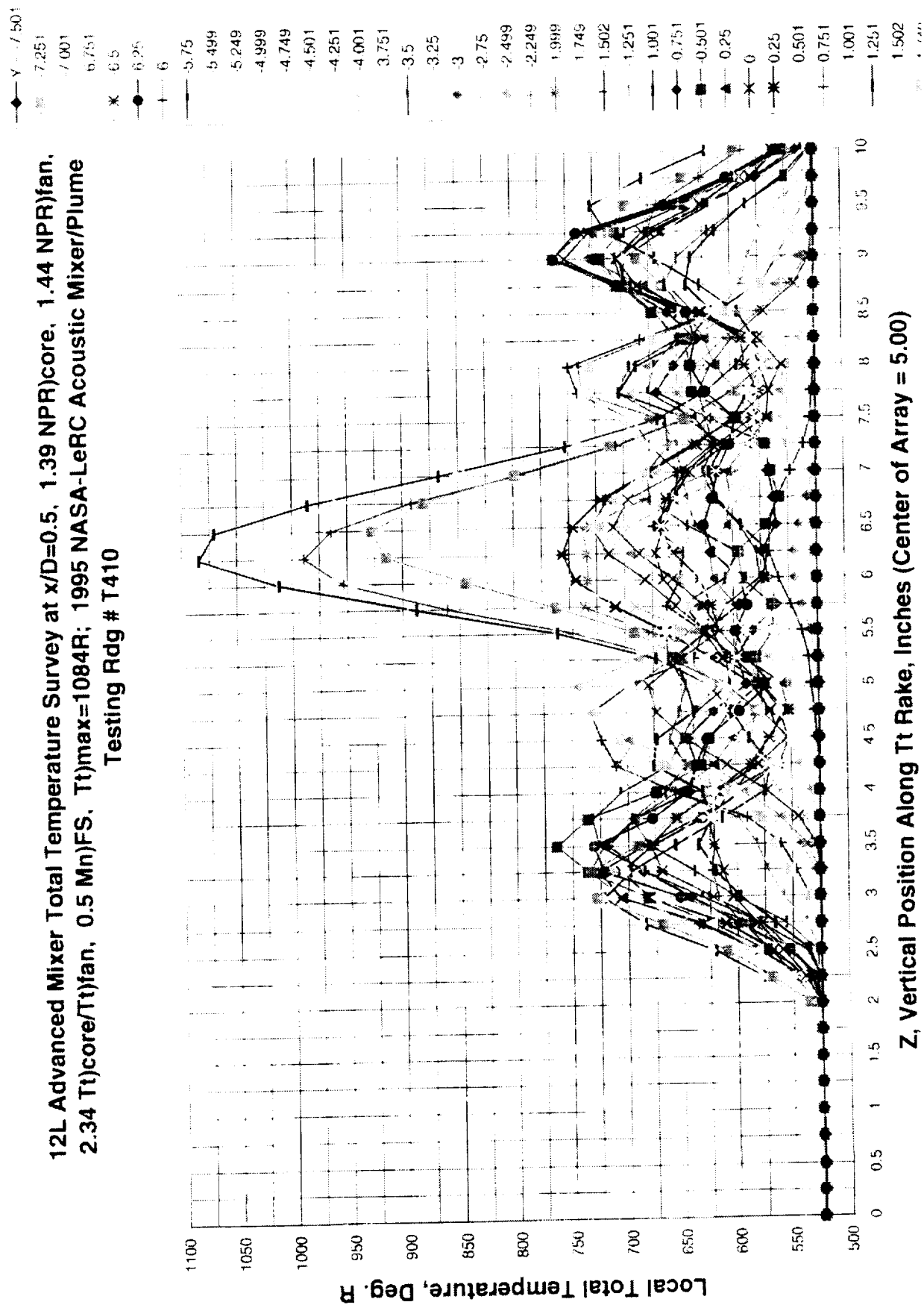


Figure 39(a). 12L Advanced Mixer (12UH) Total Temperature Survey at $x/D=1.0$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.1Mn)FS, Tt)max=1007R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # T418

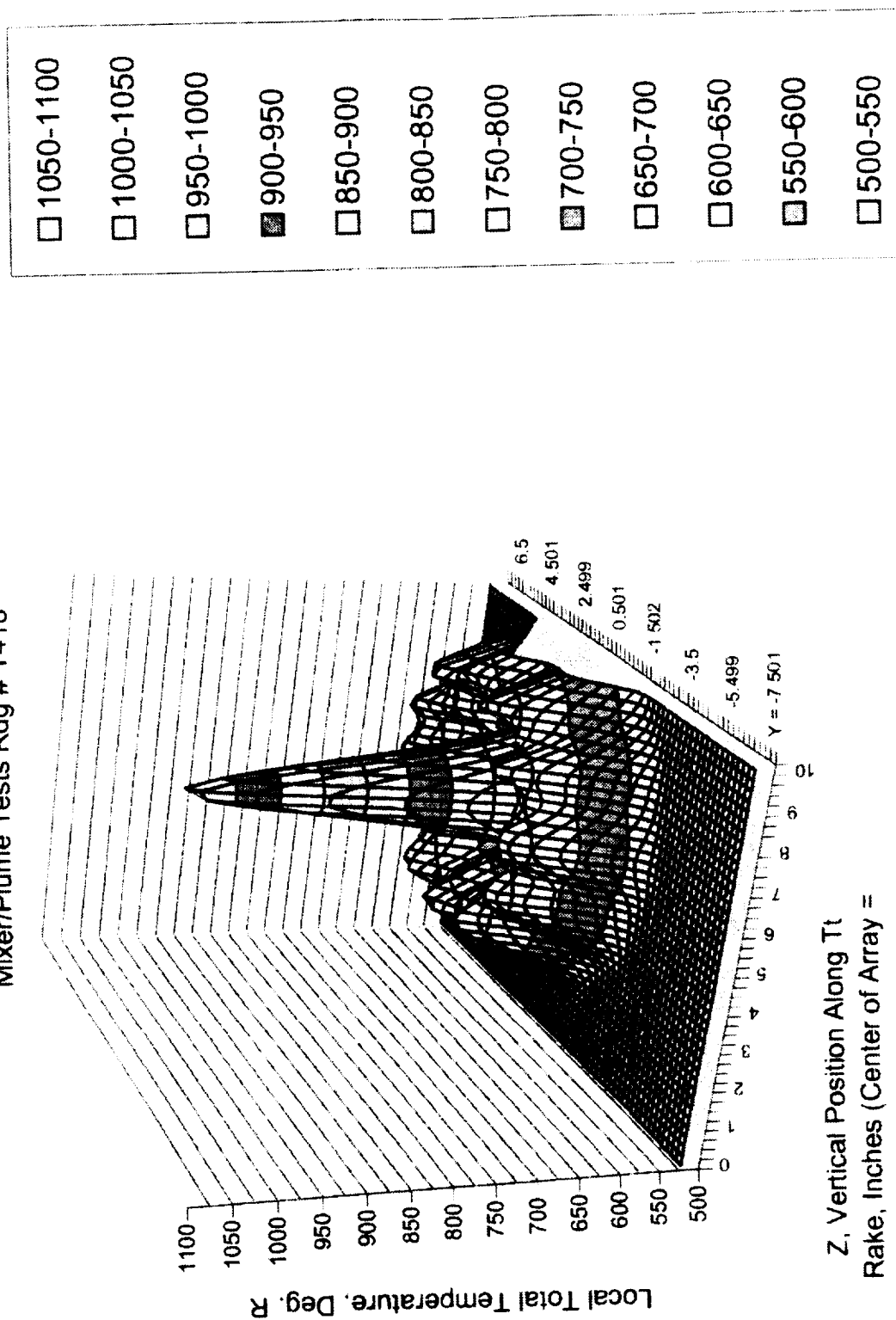


FIGURE 39 (b)

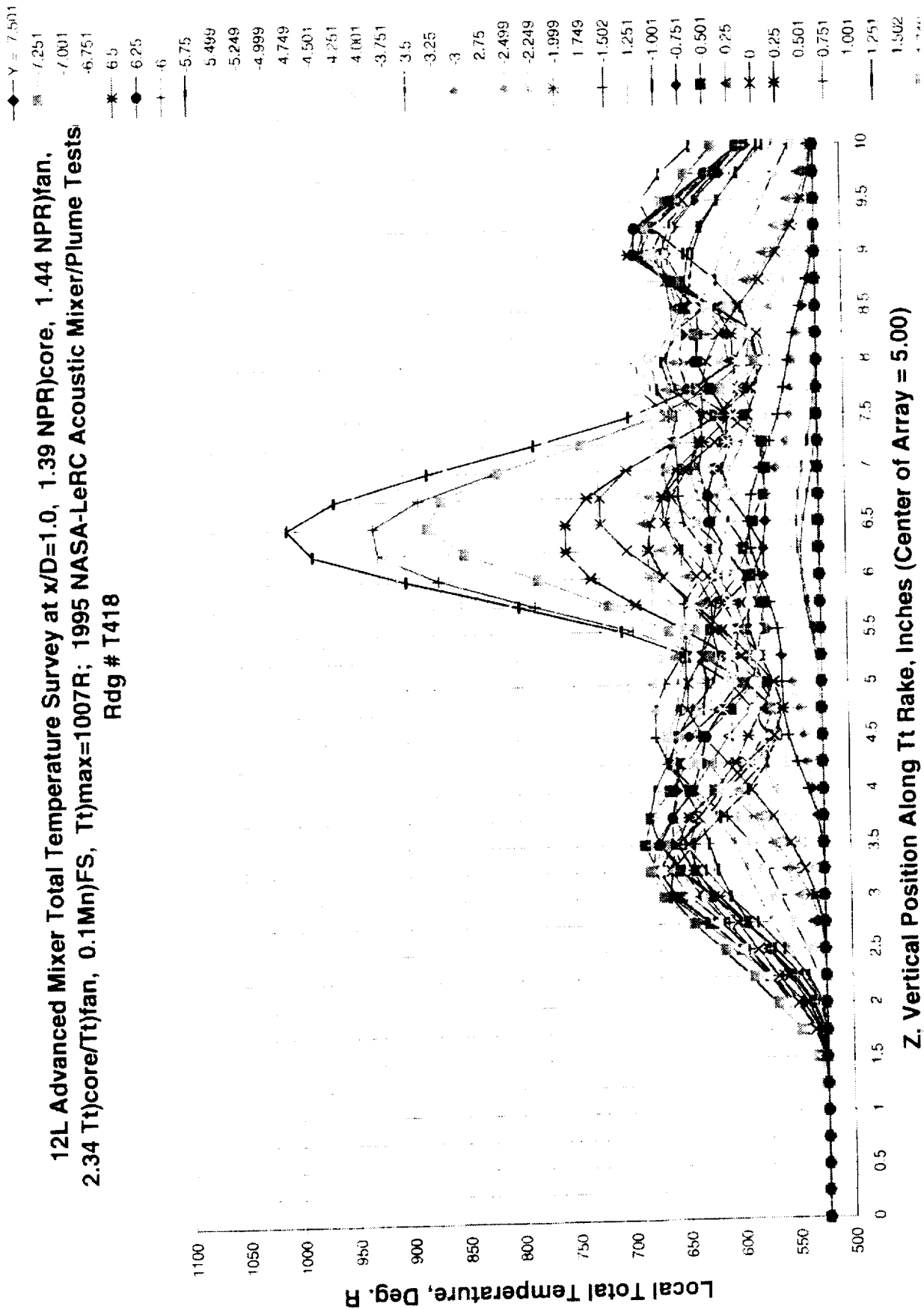


Figure 40(a). 12L Advanced Mixer (12UH) Total Temperature Survey at $x/D=4.0$, 1.39 NPR) core, 1.44 NPR) fan, 2.34 Tt) core/Tt) fan, 0.1 Mn) FS; Tt) max = 785R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # T420

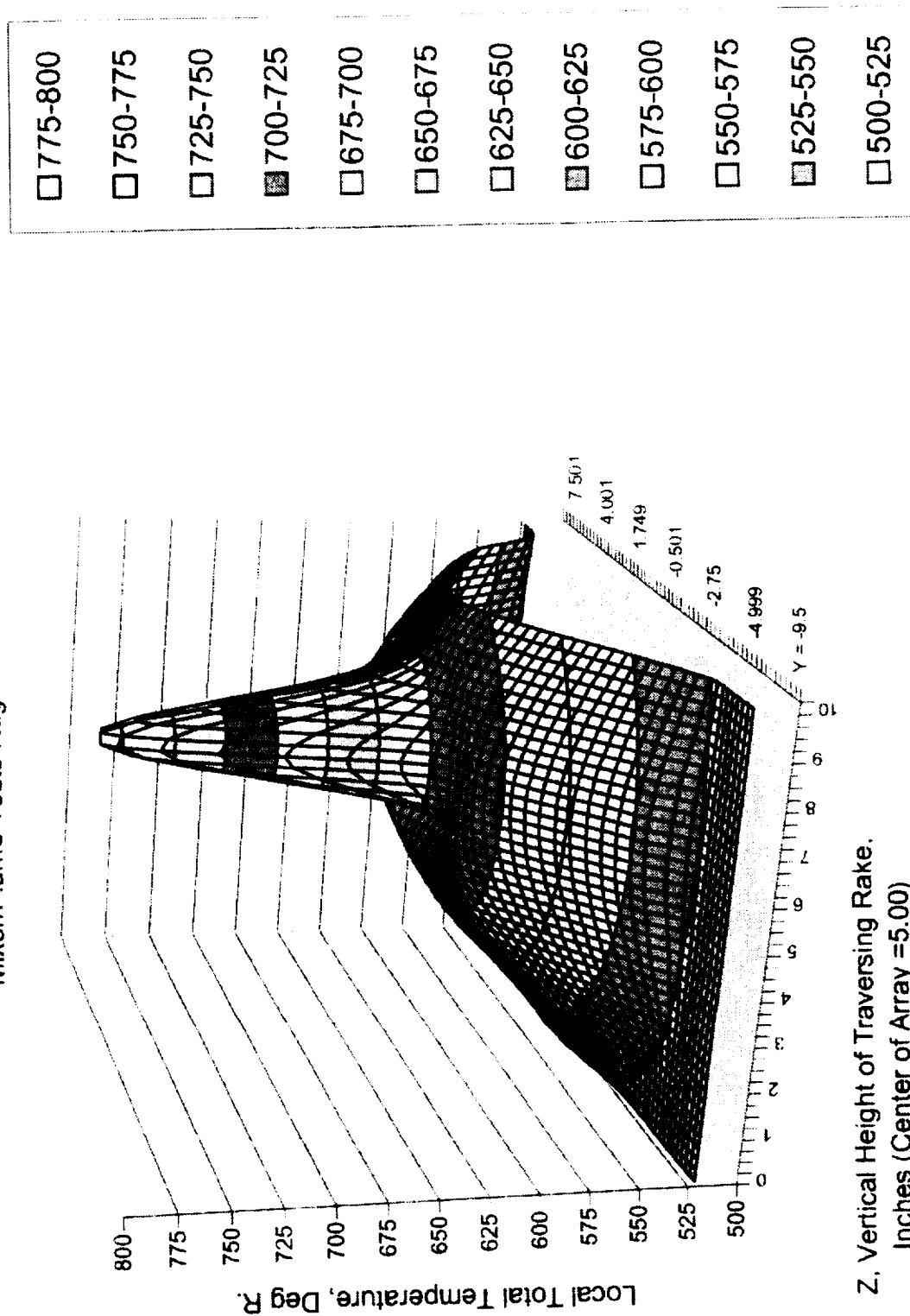


FIGURE 40 (b)

12L Advanced Mixer Total Temperature Survey at $x/D=4.0$, 1.39 NPR)core, 1.44 NPR)fan,
 2.34 Tt)core/Tt)fan, 0.1 Mn)FS; Tt)max = 785R; 1995 NASA-LeRC Acoustic Mixer/Plume
 Tests Rdg # T420

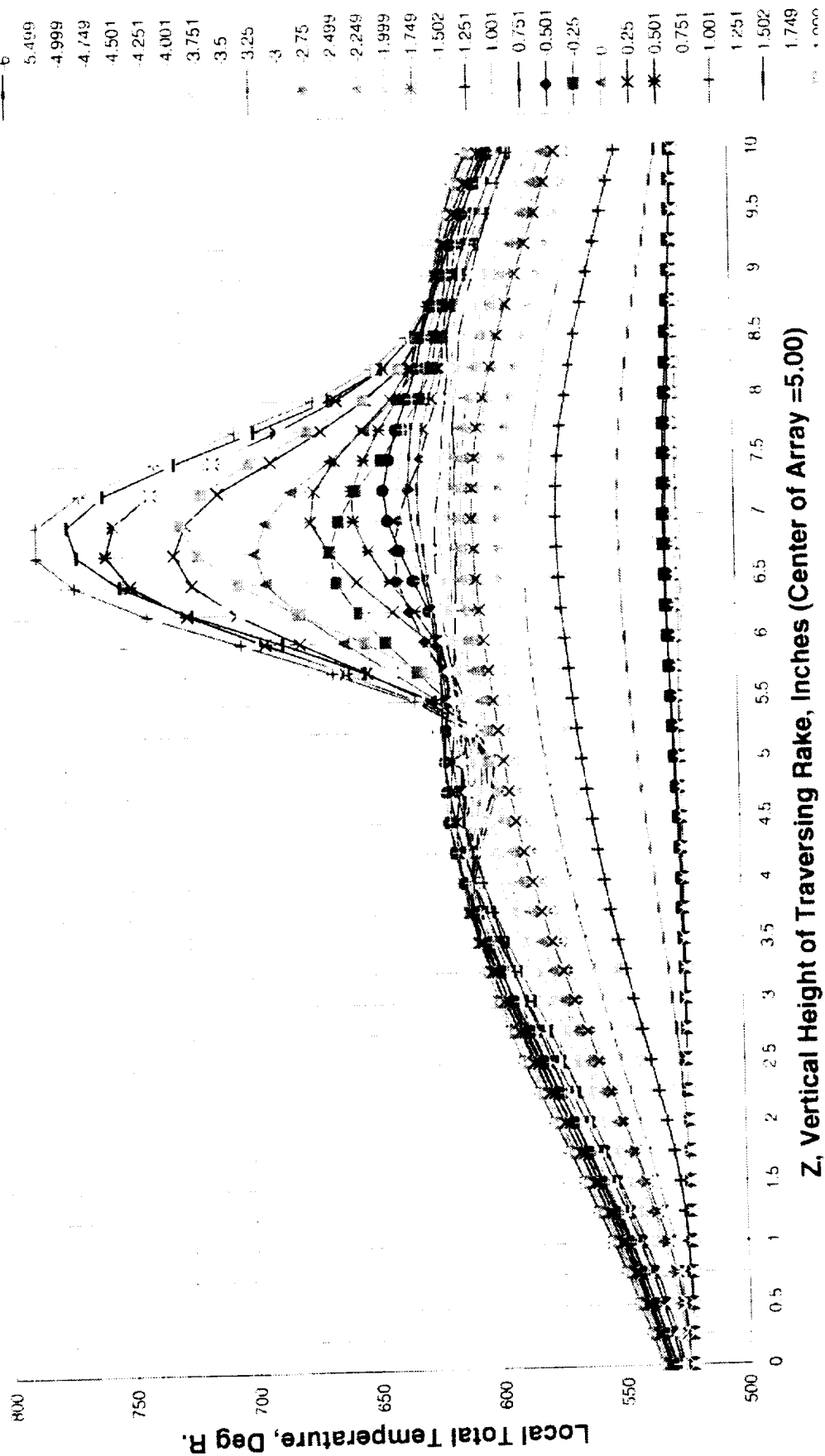


Figure 41(a). 16L Acoustic Mixer (16UH) Total Temperature Survey at $x/D=0.1$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.1 Mn)FS, Tt)max = 981R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # T378

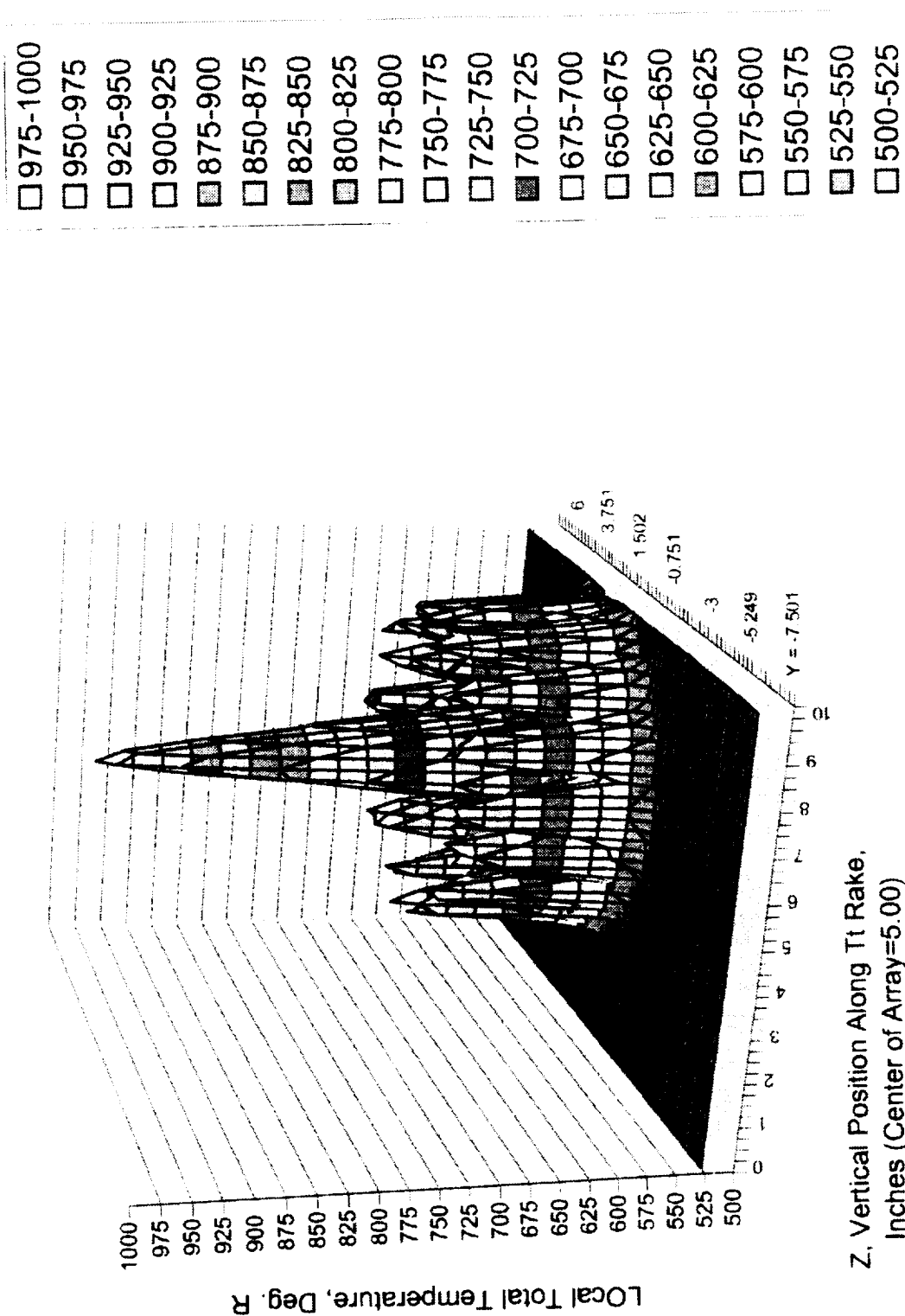


FIGURE 41 (b)

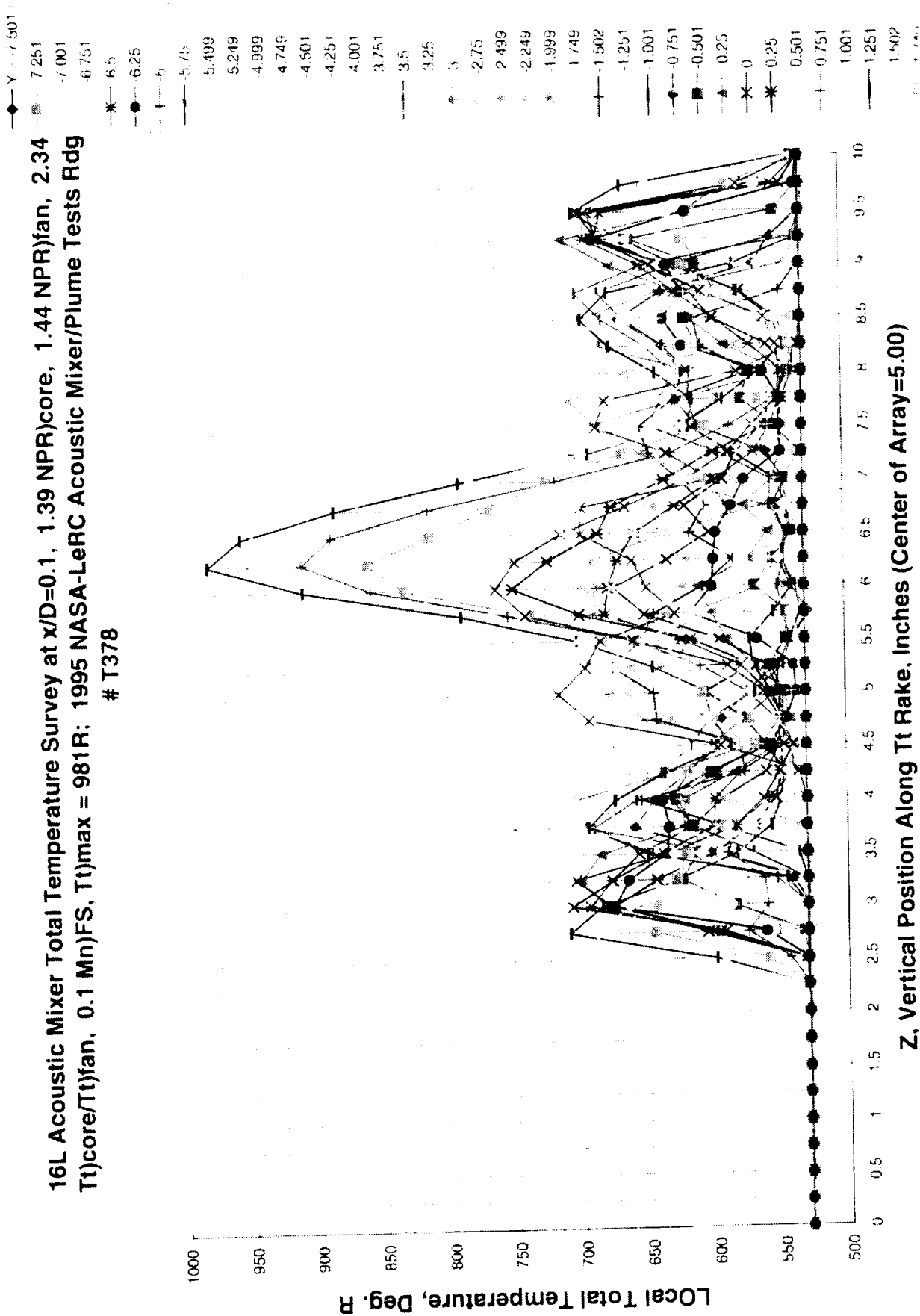


Figure 42(a). 16L Acoustic Mixer (16UH) Total Temperature Survey at $x/D=0.5$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.1 Mn)FS, Tt)max = 935R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # T380

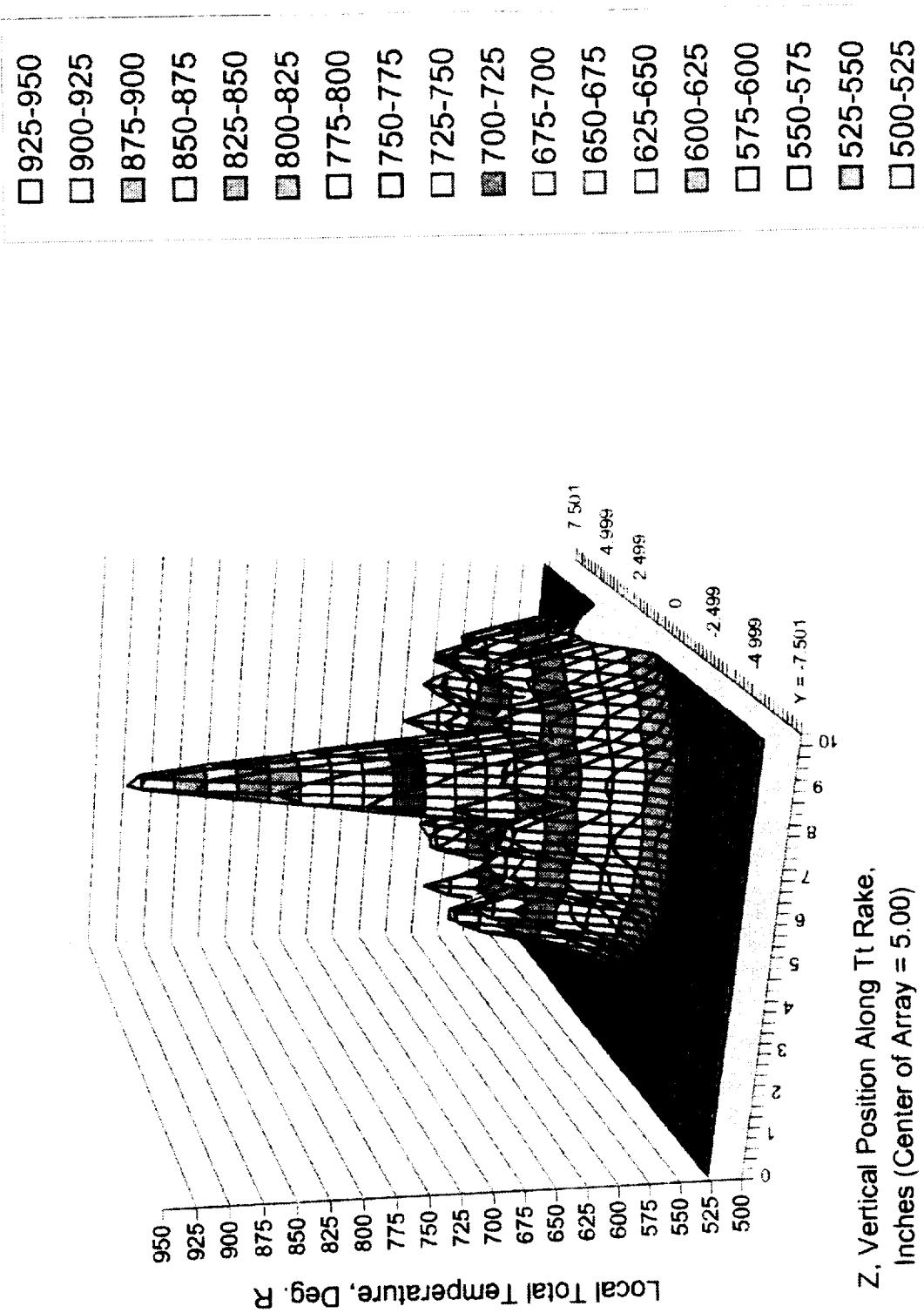


FIGURE 42 (b)

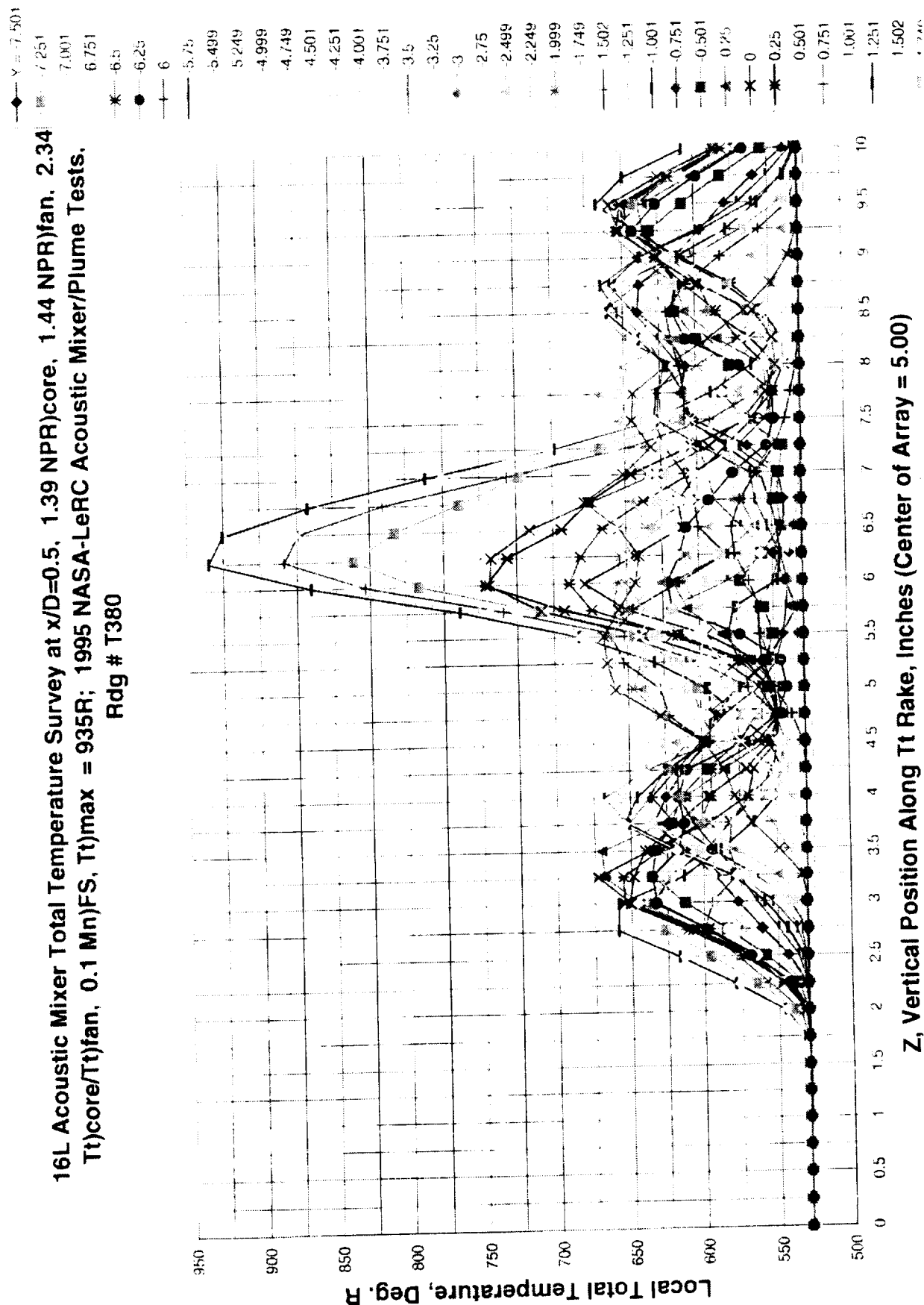


Figure 43(a). 16L Acoustic Mixer (16UH) Total Temperature Survey at $x/D=1.0$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.1 Mn)FS, Tt)Max=897R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests, Rdg # T388

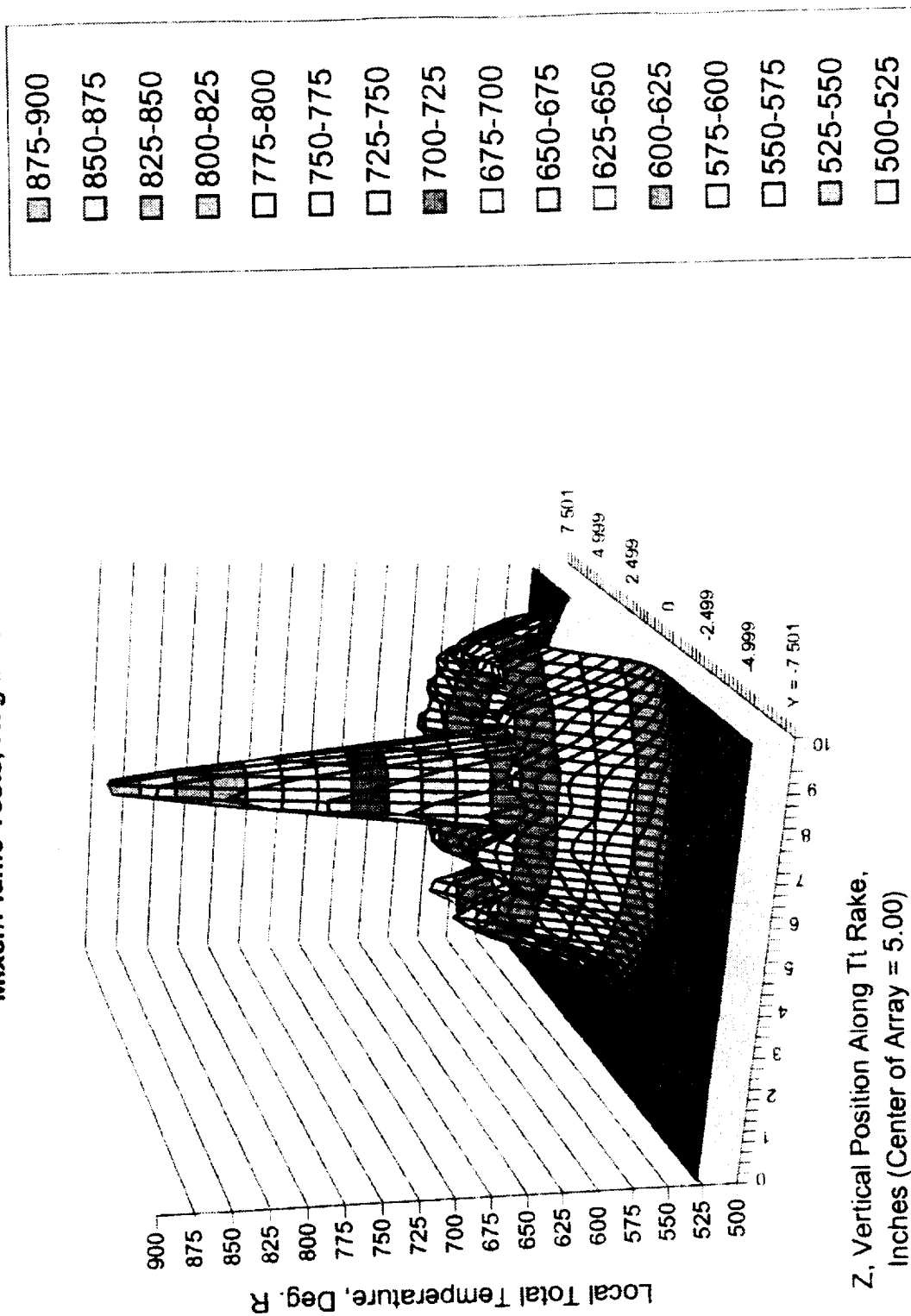


FIGURE 43(b)

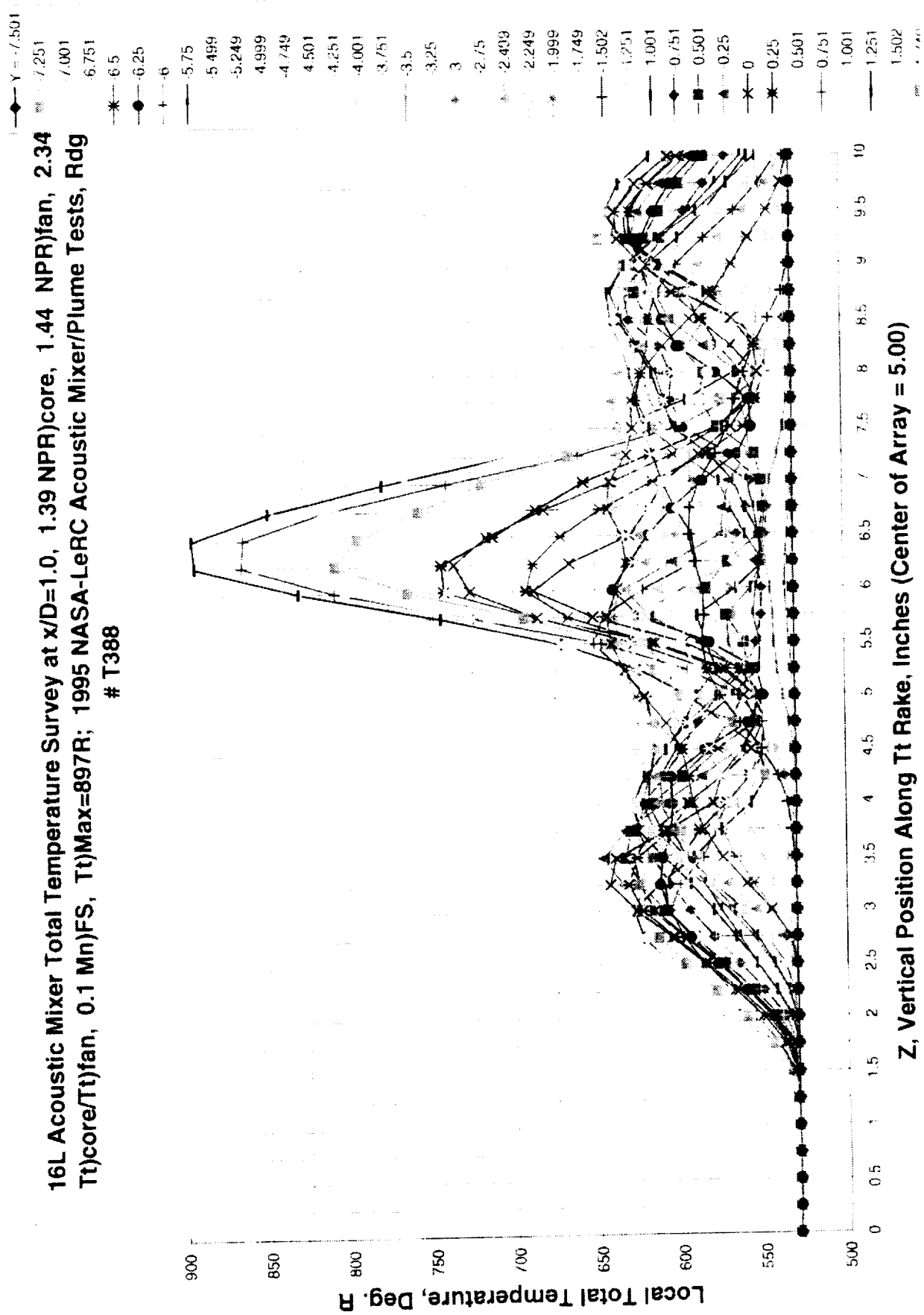


Figure 44(a). 16L Acoustic Mixer (16UH) Total Temperature Survey at $x/D=4.0$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.1 Mn)FS, Tt)max = 754R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests Rdg # T389

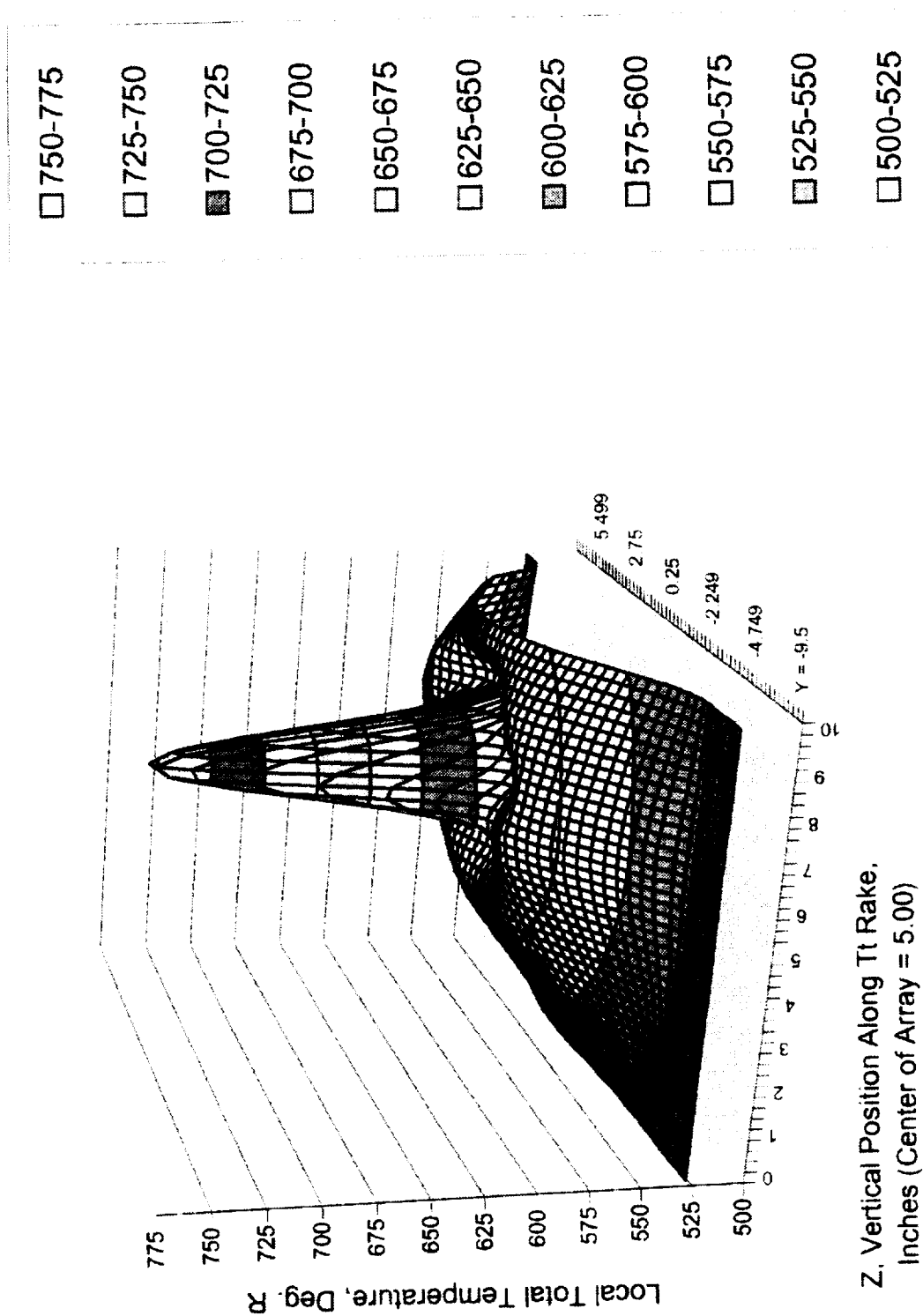


FIGURE 44 (b)

16L Acoustic Mixer Total Temperature Survey at $x/D=4.0$, 1.39 NPR)core, 1.44 NPR)fan, 2.34 Tt)core/Tt)fan, 0.1 Mn)FS, Tt)max = 754R; 1995 NASA-LeRC Acoustic Mixer/Plume Tests Rdbg # T389

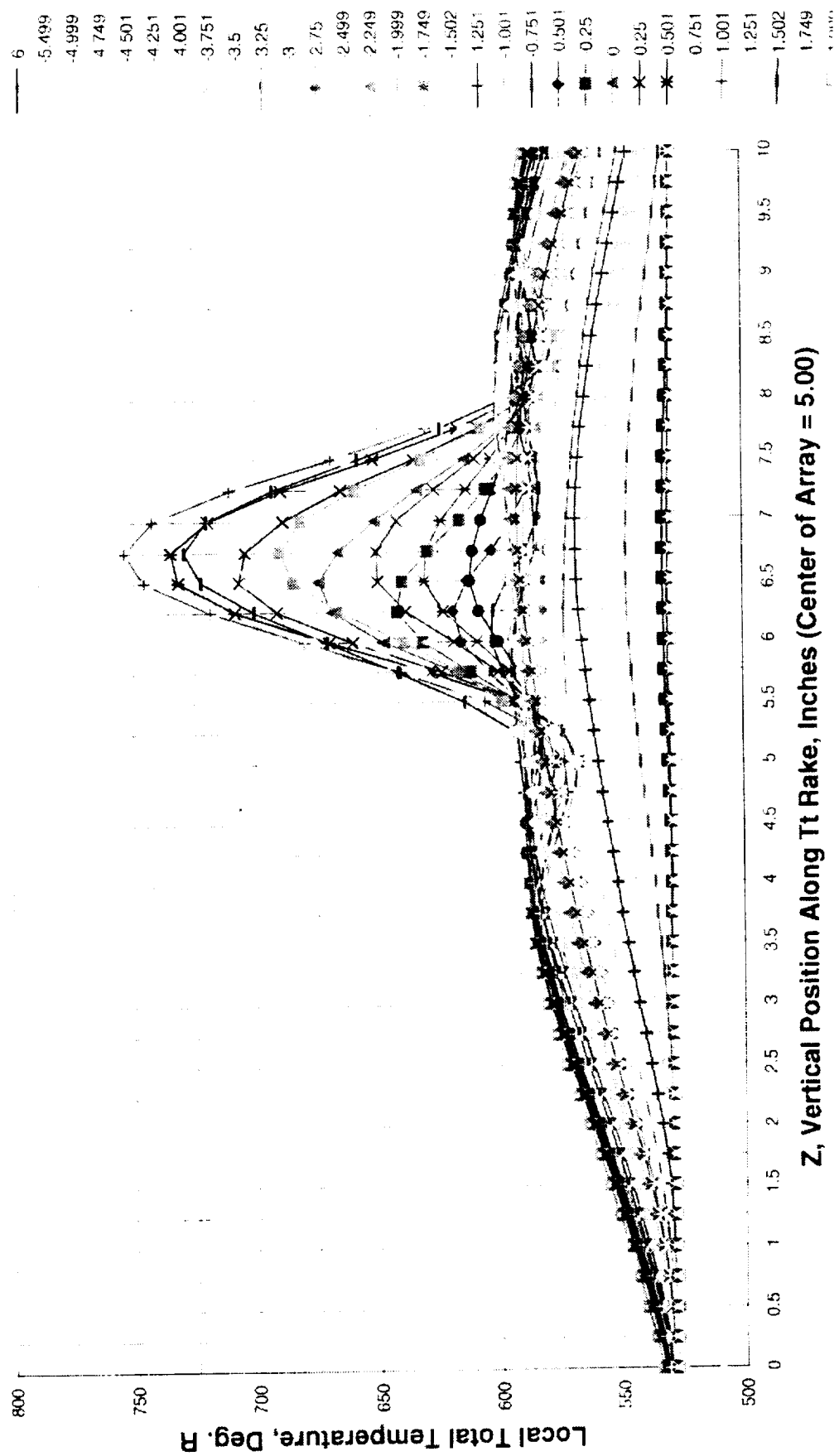
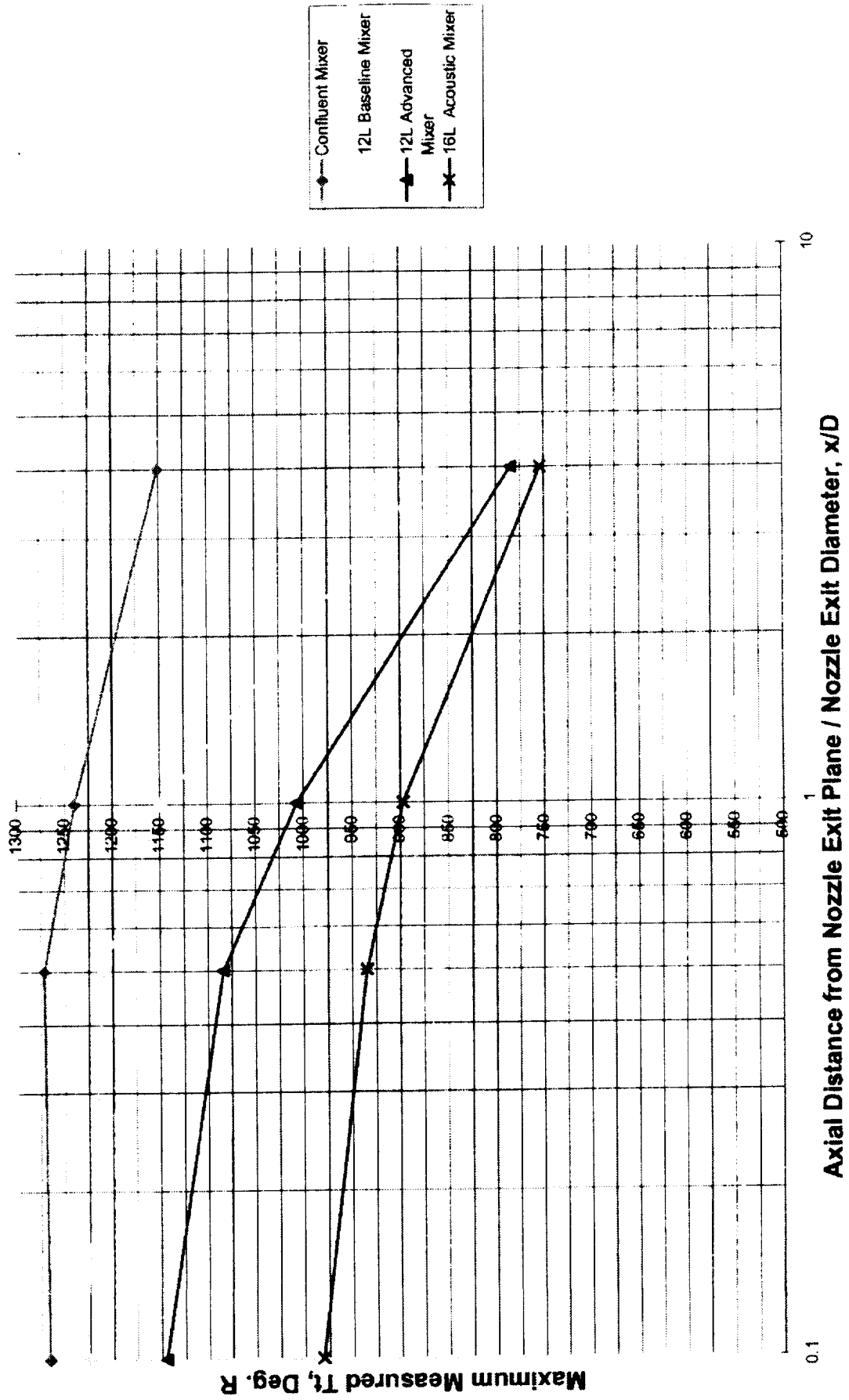


FIGURE 45

Maximum "Centerline" Total Temperature Decay for 1995 NASA LeRC Acoustic Mixers; 1.39 NPR/core, 1.44 NPR/fan, 2.37 Tt(core/Tt)fan, 0.1 Mn)FS



Part 3
Aerodynamic and Acoustic Data

Table 3.1 1996 NASA Acoustic Test Matrix

Reading Numbers

| 100% L | | | | | | | | | |
|-------------------|----------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Condition* | M(fj)** | CONF* | 12CL | 12UH | 12TH | 16UH | 20UH | 20MH | 20DH |
| A | 0 | 287 | 415 | 138 | 386 | 101 | 443 | 337 | 233 |
| B | 0 | 288 | 416 | 139 | 387 | 102 | 442 | 338 | 234 |
| C | 0 | 290 | 417 | 140 | 388 | 103 | 441 | 339 | 235 |
| D | 0 | 291 | 418 | 141 | 389 | 104 | 440 | 341 | 236 |
| E | 0.2 | 295 | 423 | 145 | 385 | 108 | 436 | 345 | 240 |
| F | 0.2 | 294 | 421 | 144 | 384 | 107 | 437 | 344 | 239 |
| G | 0.2 | 293 | 422 | 143 | 383 | 106 | 438 | 343 | 238 |
| H | 0.2 | 292 | 419 | 142 | 382 | 105 | 439 | 342 | 237 |
| I | 0.3 | 296 | 424 | 146 | 375 | 109 | 435 | 346 | 241 |
| J | 0.3 | 297 | 425 | 147 | 379 | 111 | 434 | 347 | 242 |
| K | 0.3 | 298 | 427 | 148 | 380 | 112 | 433 | 348 | 243 |
| L | 0.3 | 299 | 428 | 149 | 381 | 113 | 432 | 349 | 244 |

| 75%L | | | | | | | | | |
|-------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Condition* | M(fj) | CONF | 12CL | 12UH | 12TH | 16UH | 20UH | 20MH | 20DH |
| A | 0 | - | - | - | - | - | - | - | - |
| B | 0 | - | - | - | 469 | - | 468 | - | 456 |
| C | 0 | - | - | - | 470 | - | 467 | - | 455 |
| D | 0 | - | - | - | 471 | - | 466 | - | 454 |
| E | 0.2 | - | - | - | - | - | - | - | - |
| F | 0.2 | - | - | - | 474 | - | 465 | - | 453 |
| G | 0.2 | - | - | - | 473 | - | 464 | - | 452 |
| H | 0.2 | - | - | - | 472 | - | 463 | - | 450 |
| I | 0.3 | - | - | - | - | - | - | - | - |
| J | 0.3 | - | - | - | 475 | - | 460 | - | 447 |
| K | 0.3 | - | - | - | 476 | - | 461 | - | 448 |
| L | 0.3 | - | - | - | 477 | - | 462 | - | 449 |

| 50%L | | | | | | | | | |
|-------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Condition* | M(fj) | CONF | 12CL | 12UH | 12TH | 16UH | 20UH | 20MH | 20DH |
| A | 0 | - | 269 | 213 | 396 | 120 | 318 | 356 | 250 |
| B | 0 | - | 270 | 214 | 397 | 121 | 319 | 357 | 251 |
| C | 0 | - | 271 | 215 | 398 | 122 | 320 | 358 | 252 |
| D | 0 | - | 272 | 216 | 399 | 123 | 321 | 359 | 253 |
| E | 0.2 | - | 276 | 220 | 403 | 127 | 325 | 363 | 258 |
| F | 0.2 | - | 275 | 219 | 402 | 126 | 324 | 362 | 257 |
| G | 0.2 | - | 274 | 218 | 401 | 125 | 323 | 361 | 255 |
| H | 0.2 | - | 273 | 217 | 400 | 124 | 322 | 360 | 254 |
| I | 0.3 | - | 277 | 221 | 404 | 128 | 326 | 365 | 259 |
| J | 0.3 | - | 278 | 222 | 405 | 129 | 327 | 366 | 260 |
| K | 0.3 | - | 279 | 223 | 406 | 130 | 328 | 367 | 261 |
| L | 0.3 | - | 280 | 224 | 407 | 131 | 329 | 368 | 262 |

* See Table 3.2 (next) for explanation of operating conditions A - L ** M(fj) = Free-jet Mach number

See Table 3.3 for mixer-code nomenclature

Table 3.2 1996 NASA Acoustic Test Matrix**Nominal Operating Conditions**

| Condition | NPR(fan) | NPR(core) | TTR |
|-----------|----------|-----------|------|
| A, E, I | 1.21 | 1.17 | 2.21 |
| B, F, J | 1.44 | 1.39 | 2.34 |
| C, G, K | 1.61 | 1.54 | 2.62 |
| D, H, L | 1.82 | 1.74 | 2.79 |

Table 3.3 Mixer-Code Nomenclature

| Mixer Code | Mixer Description |
|------------|--|
| CONF | Confluent |
| 12CL | 12-lobe with cut-outs & low penetration |
| 12UH | 12-lobe unscalped & high penetration |
| 12TH | 12-pair tongue mixer |
| 16UH | 16-lobe, unscalped & high penetration |
| 20UH | 20-lobe, unscalped & high penetration |
| 20MH | 20-lobe, moderately scalped & high penetration |
| 20DH | 20-lobe, deeply scalped & high penetration |

Nomenclature for Aerodynamic Data

| | |
|--------|---|
| NPRCA | Nozzle pressure ratio of core stream |
| WPACT | Mass flow rate of core stream (lb/s) |
| ATTCA | Total temperature of core stream ($^{\circ}\text{R}$) |
| APTCA | Total pressure of core stream (psia) |
| APSCA | Static pressure of core stream (psia) |
| NPRBA | Nozzle pressure ratio of bypass stream |
| WPABT | Mass flow rate of bypass stream (lb/s) |
| ATTBA | Total temperature of bypass stream ($^{\circ}\text{R}$) |
| APTBA | Total pressure of bypass stream (psia) |
| APSBA | Static pressure of bypass stream (psia) |
| RTTA | Total temperature ratio between core and bypass streams |
| AVMEX | Free-jet Mach number |
| PAMB | Ambient pressure (psia) |
| TA | Ambient temperature ($^{\circ}\text{R}$) |
| HUMIN | Ambient relative humidity (%) |
| WBACT1 | Mass flow rate of main bypass stream (lb/s) |
| WBACT2 | Mass flow rate of additional bypass stream (lb/s) |
| VEXITA | Calculated exit jet velocity (ft/s) |

| REG | DATE | TIME | WFOCA | WFOCT | ATTC | APTC | APSC | WFOCT | LATTA | APTTA | APTTA | RTTA | AVMEX | PMMS | TA | HUBN | WBACT1 | WBACT2 | VECTA | |
|-----|-----------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|--------|
| 95 | 18-Nov-96 | 14:39 | 1 | 8.35 | 505.1 | 14.38 | 14.38 | 1 | 0.49 | 510 | 14.38 | 14.38 | 0.99 | 8.848 | 14.38 | 506.6 | 85.981 | 0.49 | 0 | 38.1 |
| 96 | 18-Nov-96 | 14:51 | 1.01 | 8.35 | 505.7 | 14.38 | 14.38 | 1.01 | 0.49 | 505.7 | 14.38 | 14.38 | 1 | 0.199 | 14.38 | 505.7 | 89.182 | 0.49 | 0 | 37.9 |
| 97 | 18-Nov-96 | 14:57 | 1.01 | 8.35 | 505 | 14.42 | 14.42 | 1.01 | 0.49 | 505.1 | 14.42 | 14.42 | 1 | 0.304 | 14.38 | 505.2 | 88.883 | 0.49 | 0 | 37.9 |
| 98 | 18-Nov-96 | 15:10 | 1.14 | 8.4 | 502 | 16.33 | 16.33 | 1.3 | 14.58 | 489.6 | 16.64 | 17.78 | 1.03 | 0.061 | 14.38 | 505 | 85.421 | 14.58 | 0 | 618.5 |
| 99 | 18-Nov-96 | 15:16 | 1.26 | 0.48 | 496.9 | 17.89 | 17.89 | 1.51 | 18.02 | 480.8 | 21.63 | 20.33 | 1.01 | 0.061 | 14.38 | 505 | 85.733 | 15.31 | 3.72 | 647.4 |
| 100 | 18-Nov-96 | 15:23 | 1.38 | 5.32 | 494.5 | 19.84 | 19.84 | 0.94 | 0.48 | 492.9 | 13.4 | 18.4 | 1 | 0.06 | 14.38 | 504.7 | 84.934 | 0.48 | 0 | 264.7 |
| 101 | 18-Nov-96 | 15:49 | 1.17 | 1.21 | 1100.8 | 16.73 | 16.65 | 1.21 | 10.41 | 488.4 | 17.32 | 16.86 | 2.22 | 0.06 | 14.38 | 504.4 | 87.084 | 10.41 | 0 | 562.1 |
| 102 | 18-Nov-96 | 16:02 | 1.39 | 1.86 | 1185.7 | 19.88 | 19.71 | 1.44 | 14.89 | 488.2 | 20.63 | 19.82 | 2.34 | 0.061 | 14.38 | 504.4 | 85.486 | 14.89 | 0 | 799.1 |
| 103 | 18-Nov-96 | 16:12 | 1.54 | 2.12 | 1313.7 | 22 | 21.79 | 1.61 | 17.48 | 500.2 | 23.65 | 22.03 | 2.83 | 0.06 | 14.38 | 504.1 | 89.036 | 15.43 | 2.08 | 658.5 |
| 104 | 18-Nov-96 | 16:18 | 1.75 | 2.43 | 1405.4 | 24.92 | 24.87 | 1.82 | 19.46 | 502.8 | 26.03 | 24.63 | 2.79 | 0.059 | 14.35 | 504.1 | 70.022 | 15.29 | 4.17 | 902.2 |
| 105 | 18-Nov-96 | 16:28 | 1.74 | 2.98 | 1408.7 | 24.77 | 24.52 | 1.82 | 19.4 | 506.1 | 25.95 | 24.75 | 2.78 | 0.199 | 14.35 | 503.8 | 73.141 | 15.24 | 4.18 | 898.9 |
| 106 | 18-Nov-96 | 16:32 | 1.54 | 2.07 | 1326.1 | 21.88 | 21.68 | 1.81 | 17.29 | 505.9 | 22.98 | 21.85 | 2.82 | 0.2 | 14.35 | 503.7 | 70.844 | 15.34 | 1.95 | 857.8 |
| 107 | 18-Nov-96 | 16:43 | 1.39 | 1.9 | 1185.9 | 19.79 | 19.62 | 1.44 | 14.66 | 506.5 | 20.58 | 19.77 | 2.84 | 0.201 | 14.34 | 503.4 | 73.24 | 12.7 | 1.96 | 730.6 |
| 108 | 18-Nov-96 | 16:50 | 1.17 | 1.13 | 1118.8 | 16.61 | 16.54 | 1.21 | 10.13 | 507.2 | 17.24 | 16.8 | 2.21 | 0.202 | 14.34 | 503 | 74.519 | 8.14 | 1.99 | 474.7 |
| 109 | 18-Nov-96 | 17:00 | 1.17 | 1.09 | 1116.8 | 16.6 | 16.54 | 1.21 | 10.13 | 507.2 | 17.24 | 16.8 | 2.21 | 0.202 | 14.34 | 502.8 | 76.902 | 7.87 | 2.04 | 463.4 |
| 110 | 18-Nov-96 | 17:09 | 1.39 | 1.9 | 1178.5 | 19.74 | 19.58 | 1.44 | 14.48 | 505.5 | 20.5 | 19.71 | 2.33 | 0.302 | 14.34 | 502.5 | 74.023 | 12.46 | 2.02 | 718.4 |
| 111 | 18-Nov-96 | 17:11 | 1.39 | 2.04 | 1178.8 | 19.74 | 19.58 | 1.44 | 14.48 | 505.5 | 20.5 | 19.71 | 2.33 | 0.302 | 14.35 | 502.4 | 74.698 | 12.47 | 2.02 | 733.1 |
| 112 | 18-Nov-96 | 17:15 | 1.64 | 2.18 | 1322.8 | 21.89 | 21.69 | 1.81 | 17.12 | 505.5 | 22.89 | 21.89 | 2.62 | 0.302 | 14.35 | 501.9 | 75.381 | 15.36 | 1.74 | 870.4 |
| 113 | 18-Nov-96 | 17:20 | 1.74 | 2.42 | 1412.6 | 24.72 | 24.47 | 1.82 | 19.32 | 506.7 | 25.88 | 24.87 | 2.79 | 0.302 | 14.35 | 501.7 | 75.341 | 15.27 | 4.06 | 906.3 |
| 114 | 18-Nov-96 | 18:51 | 1 | 0.35 | 508.9 | 14.34 | 14.34 | 1 | 0.49 | 508.9 | 14.34 | 14.34 | 1 | 0.052 | 14.34 | 508.6 | 68.274 | 0.49 | 0 | 37.8 |
| 115 | 18-Nov-96 | 18:58 | 1.01 | 0.35 | 507.6 | 14.39 | 14.39 | 1.01 | 0.49 | 506.7 | 14.39 | 14.39 | 1 | 0.198 | 14.34 | 505.8 | 69.223 | 0.49 | 0 | 37.7 |
| 116 | 18-Nov-96 | 19:02 | 1.02 | 0.35 | 506.8 | 14.46 | 14.46 | 1.02 | 0.49 | 506.1 | 14.46 | 14.47 | 1 | 0.301 | 14.34 | 505.2 | 71.086 | 0.49 | 0 | 37.7 |
| 117 | 18-Nov-96 | 19:14 | 1.13 | 11.63 | 503.4 | 16.09 | 16.09 | 1.3 | 14.85 | 497.3 | 18.39 | 17.66 | 1.01 | 0.085 | 14.35 | 504 | 74.535 | 14.65 | 0 | 1005.7 |
| 118 | 18-Nov-96 | 19:18 | 1.24 | 11.28 | 497 | 17.7 | 17.7 | 1.51 | 19.05 | 495.2 | 21.54 | 20.22 | 1 | 0.085 | 14.35 | 503.6 | 72.814 | 15.33 | 3.72 | 1007.3 |
| 119 | 18-Nov-96 | 19:22 | 1.39 | 5.29 | 497.8 | 19.95 | 19.95 | 1.33 | 0.94 | 495.1 | 13.48 | 13.48 | 1.01 | 0.084 | 14.35 | 503.4 | 74.899 | 0.46 | 0 | 265.4 |
| 120 | 18-Nov-96 | 19:44 | 1.17 | 1.26 | 1096.5 | 16.7 | 16.63 | 1.21 | 10.39 | 495.8 | 17.3 | 16.85 | 2.21 | 0.07 | 14.35 | 502.2 | 74.299 | 10.33 | 0 | 562.2 |
| 121 | 18-Nov-96 | 19:55 | 1.39 | 2 | 1161.2 | 19.88 | 19.52 | 1.44 | 14.47 | 506 | 20.46 | 19.68 | 2.34 | 0.068 | 14.35 | 501.4 | 75.491 | 14.88 | 0 | 798.8 |
| 122 | 18-Nov-96 | 20:07 | 1.54 | 2.18 | 1303 | 21.99 | 21.78 | 1.61 | 17.38 | 497.4 | 23.01 | 22 | 2.82 | 0.069 | 14.34 | 501.2 | 79.381 | 15.46 | 1.92 | 859 |
| 123 | 18-Nov-96 | 20:14 | 1.74 | 2.52 | 1397.7 | 24.73 | 24.47 | 1.82 | 19.49 | 500.6 | 25.84 | 24.74 | 2.79 | 0.089 | 14.34 | 501 | 79.948 | 15.35 | 4.14 | 909.9 |
| 124 | 18-Nov-96 | 20:22 | 1.79 | 2.47 | 1405 | 24.87 | 24.41 | 1.82 | 19.35 | 503.3 | 25.85 | 24.66 | 2.79 | 0.201 | 14.34 | 500.5 | 81.575 | 15.24 | 4.11 | 905.3 |
| 125 | 18-Nov-96 | 20:28 | 1.54 | 2.14 | 1322 | 21.83 | 21.63 | 1.61 | 17.25 | 504.4 | 22.95 | 21.94 | 2.62 | 0.202 | 14.34 | 500.6 | 81.827 | 15.33 | 1.92 | 862.4 |
| 126 | 18-Nov-96 | 20:42 | 1.39 | 1.96 | 1181.5 | 19.69 | 19.52 | 1.44 | 14.47 | 506 | 20.46 | 19.68 | 2.34 | 0.204 | 14.34 | 500.2 | 83.805 | 14.47 | 0 | 796.5 |
| 127 | 18-Nov-96 | 20:52 | 1.17 | 1.16 | 1119.5 | 16.58 | 16.52 | 1.21 | 10.08 | 508 | 17.23 | 16.78 | 2.21 | 0.203 | 14.33 | 500 | 81.101 | 16.06 | 0 | 554.3 |
| 128 | 18-Nov-96 | 20:59 | 1.16 | 1.15 | 1119 | 16.66 | 16.59 | 1.22 | 9.95 | 505.7 | 17.27 | 16.84 | 2.21 | 0.302 | 14.33 | 499.5 | 80.492 | 9.95 | 0 | 549.3 |
| 129 | 18-Nov-96 | 21:04 | 1.39 | 1.96 | 1179.2 | 19.84 | 19.47 | 1.44 | 14.16 | 505.2 | 20.32 | 19.58 | 2.33 | 0.301 | 14.33 | 499.5 | 83.206 | 14.16 | 0 | 785.6 |
| 130 | 18-Nov-96 | 21:10 | 1.53 | 2.1 | 1318.5 | 21.7 | 21.5 | 1.61 | 17.03 | 505.4 | 22.8 | 21.81 | 2.61 | 0.302 | 14.33 | 499.2 | 80.433 | 15.38 | 1.65 | 881.9 |
| 131 | 18-Nov-96 | 21:16 | 1.74 | 2.43 | 1415.1 | 24.68 | 24.32 | 1.82 | 19.21 | 506.8 | 25.74 | 24.56 | 2.79 | 0.302 | 14.33 | 499 | 80.315 | 15.26 | 3.95 | 908 |
| 132 | 18-Nov-96 | 21:16 | 1 | 0.34 | 511.8 | 14.31 | 14.31 | 1 | 0.48 | 509.3 | 14.31 | 14.31 | 1 | 0.048 | 14.31 | 504.1 | 55.15 | 0.49 | 0 | 38 |
| 133 | 18-Nov-96 | 21:40 | 1.01 | 0.35 | 508 | 14.33 | 14.33 | 1.01 | 0.49 | 509.3 | 14.33 | 14.33 | 1 | 0.199 | 14.3 | 503.3 | 55.092 | 0.49 | 0 | 37.8 |
| 134 | 18-Nov-96 | 21:59 | 1.01 | 0.35 | 506.2 | 14.36 | 14.36 | 1.01 | 0.49 | 508.2 | 14.36 | 14.37 | 1 | 0.301 | 14.3 | 500.5 | 58.466 | 0.49 | 0 | 37.7 |
| 135 | 18-Nov-96 | 21:59 | 1.11 | 11.28 | 500.6 | 15.81 | 15.81 | 1.3 | 14.16 | 491.1 | 18.48 | 17.66 | 1.82 | 0.058 | 14.31 | 500.8 | 58.179 | 14.16 | 0 | 975.6 |
| 136 | 18-Nov-96 | 22:22 | 1.21 | 11.28 | 493.5 | 17.29 | 17.29 | 1.51 | 19 | 492.3 | 21.67 | 20.91 | 1 | 0.082 | 14.31 | 500.7 | 57.778 | 15.31 | 3.69 | 1003.4 |
| 137 | 18-Nov-96 | 22:30 | 1.39 | 7.09 | 493.1 | 19.67 | 19.61 | 0.93 | 0.48 | 493.1 | 13.25 | 13.26 | 1 | 0.066 | 14.32 | 500.1 | 58.97 | 8.28 | 0 | 589.4 |
| 138 | 18-Nov-96 | 22:37 | 1.17 | 1.87 | 1097.2 | 16.62 | 16.47 | 1.2 | 9.28 | 497.8 | 17.15 | 16.79 | 2.2 | 0.067 | 14.32 | 500.1 | 60.622 | 13.7 | 0 | 842.9 |
| 139 | 18-Nov-96 | 22:43 | 1.39 | 2.81 | 1165.2 | 19.8 | 19.46 | 1.45 | 13.7 | 497.8 | 20.59 | 19.92 | 2.34 | 0.067 | 14.32 | 500.1 | 61.977 | 15.41 | 0.57 | 945.3 |
| 140 | 18-Nov-96 | 22:49 | 1.54 | 3.07 | 1309.2 | 21.87 | 21.46 | 1.61 | 15.88 | 498.5 | 22.89 | 22.06 | 2.62 | 0.058 | 14.32 | 499.8 | 61.955 | 15.28 | 3.39 | 1004.8 |
| 141 | 18-Nov-96 | 22:56 | 1.74 | 3.5 | 1394.5 | 24.72 | 24.23 | 1.82 | 18.61 | 501 | 25.83 | 24.93 | 2.78 | 0.088 | 14.32 | 499.8 | 63.861 | 15.25 | 3.41 | 1009.7 |
| 142 | 18-Nov-96 | 23:11 | 1.74 | 3.51 | 1403 | 24.67 | 24.17 | 1.82 | 18.87 | 503.8 | 25.85 | 24.85 | 2.78 | 0.203 | 14.32 | 499.6 | 64.666 | 15.31 | 0.85 | 980.1 |
| 143 | 18-Nov-96 | 23:20 | 1.54 | 3.16 | 1322.6 | 21.89 | 21.47 | 1.61 | 16.17 | 505.1 | 22.87 | 22.84 | 2.62 | 0.203 | 14.32 | 499.6 | 64.666 | 15.31 | 0.85 | 980.1 |

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----------|-------|------|------|--------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|--------|-------|------|--------|
| 144 | 19-Nov-98 | 17:28 | 1.39 | 2.72 | 1179.8 | 18.72 | 18.38 | 1.44 | 13.58 | 505.4 | 28.44 | 18.78 | 2.33 | 0.199 | 14.32 | 498.6 | 85.985 | 13.59 | 0 | 833.9 |
| 145 | 19-Nov-98 | 17:35 | 1.17 | 1.73 | 1120.7 | 18.81 | 18.49 | 1.2 | 9.19 | 506 | 17.1 | 16.75 | 2.21 | 0.2 | 14.32 | 498.3 | 85.207 | 9.19 | 0 | 574.1 |
| 146 | 19-Nov-98 | 17:58 | 1.18 | 1.71 | 1119.8 | 18.85 | 18.5 | 1.21 | 9.15 | 504.3 | 17.14 | 15.8 | 2.22 | 0.383 | 14.32 | 497.2 | 88.316 | 9.15 | 0 | 649.1 |
| 147 | 19-Nov-98 | 18:09 | 1.38 | 2.7 | 1178.3 | 18.82 | 18.28 | 1.44 | 13.35 | 503.2 | 20.3 | 19.87 | 2.34 | 0.303 | 14.32 | 496.7 | 87.848 | 13.35 | 0 | 821.3 |
| 148 | 19-Nov-98 | 18:21 | 1.54 | 2.94 | 1321.8 | 21.77 | 21.37 | 1.81 | 18.1 | 503.8 | 22.8 | 21.98 | 2.82 | 0.304 | 14.32 | 495.4 | 78.087 | 15.4 | 0.7 | 940.7 |
| 149 | 19-Nov-98 | 18:32 | 1.74 | 3.42 | 1413.2 | 24.88 | 24.17 | 1.83 | 18.85 | 505.8 | 25.82 | 24.83 | 2.8 | 0.304 | 14.32 | 498.3 | 89.916 | 15.23 | 3.43 | 1005.6 |
| 150 | 19-Nov-98 | 20:14 | 1.81 | 0.56 | 505.3 | 14.32 | 14.32 | 1.01 | 8.48 | 505.3 | 14.32 | 14.32 | 1 | 0.083 | 14.32 | 502.8 | 55.532 | 0.49 | 0 | 37.7 |

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----------|-------|------|-------|--------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|--------|-------|------|--------|
| 200 | 21-Nov-96 | 11:17 | 1 | 10.36 | 517.6 | 14.32 | 14.32 | 1 | 14.83 | 514.9 | 14.31 | 14.32 | 1.01 | 0.851 | 14.32 | 505.7 | 57.919 | 14.83 | 0 | 1997.5 |
| 201 | 21-Nov-96 | 11:19 | 1 | 10.39 | 517 | 14.31 | 14.31 | 1 | 14.84 | 515 | 14.31 | 14.32 | 1 | 0.848 | 14.32 | 505.4 | 57.216 | 14.84 | 0 | 1997.7 |
| 202 | 21-Nov-96 | 11:19 | 1 | 10.39 | 517 | 14.31 | 14.31 | 1 | 14.85 | 514.9 | 14.31 | 14.31 | 1 | 0.848 | 14.32 | 505.6 | 57.069 | 14.85 | 0 | 1997.8 |
| 203 | 21-Nov-96 | 11:22 | 1 | 10.4 | 516.3 | 14.31 | 14.31 | 1 | 14.86 | 514.3 | 14.31 | 14.32 | 1 | 0.851 | 14.31 | 505.4 | 56.894 | 14.86 | 0 | 1997.5 |
| 204 | 21-Nov-96 | 11:24 | 1 | 10.39 | 516.3 | 14.31 | 14.32 | 1 | 14.85 | 514.4 | 14.31 | 14.32 | 1 | 0.851 | 14.32 | 505.1 | 59.844 | 14.85 | 0 | 1996.9 |
| 205 | 21-Nov-96 | 11:26 | 1 | 10.41 | 515.9 | 14.31 | 14.31 | 1 | 14.87 | 514 | 14.31 | 14.31 | 1 | 0.851 | 14.31 | 505 | 59.25 | 14.87 | 0 | 1997.5 |
| 206 | 21-Nov-96 | 11:28 | 1 | 10.41 | 516 | 14.31 | 14.31 | 1 | 14.88 | 513.8 | 14.31 | 14.31 | 1 | 0.851 | 14.31 | 506.3 | 59.022 | 14.88 | 0 | 1997.8 |
| 207 | 21-Nov-96 | 16:34 | 1 | 0.34 | 522.1 | 14.32 | 14.32 | 1 | 0.46 | 523.7 | 14.32 | 14.32 | 1 | 0.012 | 14.32 | 512.4 | 46.859 | 0.48 | 0 | 138.7 |
| 208 | 21-Nov-96 | 16:46 | 1.1 | 0.39 | 505.4 | 15.71 | 15.71 | 1.3 | 14.53 | 493.9 | 16.64 | 17.79 | 1.02 | 0.015 | 14.32 | 507.9 | 50.497 | 14.53 | 0 | 1621.3 |
| 209 | 21-Nov-96 | 17:06 | 1.08 | 0.37 | 502.2 | 15.19 | 15.19 | 1.2 | 11.88 | 498.4 | 17.21 | 16.6 | 1.01 | 0.034 | 14.33 | 504.3 | 55.592 | 11.88 | 0 | 1524.1 |
| 210 | 21-Nov-96 | 17:21 | 1.1 | 0.36 | 502.8 | 15.71 | 15.71 | 1.3 | 14.85 | 499 | 19.64 | 17.79 | 1.01 | 0.044 | 14.33 | 502.4 | 55.43 | 14.85 | 0 | 831.2 |
| 211 | 21-Nov-96 | 17:40 | 1.19 | 0.42 | 501.3 | 17.07 | 17.07 | 1.52 | 19.04 | 487.5 | 21.71 | 20.42 | 1.03 | 0.05 | 14.33 | 501.6 | 57.481 | 15.35 | 3.69 | 844.2 |
| 212 | 21-Nov-96 | 17:47 | 1.39 | 7.12 | 496.8 | 19.9 | 18.84 | 0.94 | 0.46 | 494.1 | 13.39 | 13.39 | 1.01 | 0.851 | 14.34 | 501 | 57.566 | 0.46 | 0 | 345.7 |
| 213 | 21-Nov-96 | 18:18 | 1.17 | 1.84 | 1110.8 | 16.7 | 16.53 | 1.21 | 9.31 | 502.2 | 17.32 | 16.95 | 2.21 | 0.05 | 14.34 | 500.4 | 58.261 | 9.31 | 0 | 827.6 |
| 214 | 21-Nov-96 | 18:29 | 1.39 | 2.88 | 1176.1 | 19.82 | 19.45 | 1.44 | 13.16 | 502.2 | 20.56 | 19.92 | 2.34 | 0.051 | 14.34 | 500 | 58.773 | 13.16 | 0 | 827.6 |
| 215 | 21-Nov-96 | 18:48 | 1.54 | 3.13 | 1322.5 | 22.07 | 21.62 | 1.62 | 15.41 | 503.9 | 23.12 | 22.29 | 2.62 | 0.053 | 14.35 | 499 | 60.019 | 15.41 | 0 | 957.4 |
| 216 | 21-Nov-96 | 18:59 | 1.74 | 3.48 | 1414 | 24.85 | 24.32 | 1.83 | 17.99 | 504.8 | 26.1 | 25.11 | 2.8 | 0.055 | 14.35 | 498.5 | 60.862 | 15.28 | 2.71 | 1010.5 |
| 217 | 21-Nov-96 | 19:11 | 1.74 | 3.49 | 1413.2 | 24.79 | 24.28 | 1.82 | 17.86 | 505.4 | 25.99 | 25.01 | 2.8 | 0.202 | 14.35 | 498 | 62.16 | 15.24 | 2.52 | 1010.2 |
| 218 | 21-Nov-96 | 19:21 | 1.54 | 3.13 | 1326.8 | 22.02 | 21.56 | 1.61 | 15.37 | 505.3 | 22.98 | 22.17 | 2.62 | 0.203 | 14.35 | 497.4 | 61.634 | 15.37 | 0 | 959.2 |
| 219 | 21-Nov-96 | 19:29 | 1.39 | 2.88 | 1183.3 | 19.86 | 19.49 | 1.45 | 13.12 | 505.3 | 20.61 | 19.96 | 2.34 | 0.204 | 14.35 | 497.3 | 63.077 | 13.12 | 0 | 829 |
| 220 | 21-Nov-96 | 19:35 | 1.17 | 1.84 | 1116 | 16.7 | 16.53 | 1.21 | 8.84 | 506 | 17.23 | 16.86 | 2.21 | 0.204 | 14.35 | 497.2 | 83.86 | 8.94 | 0 | 572.7 |
| 221 | 21-Nov-96 | 19:45 | 1.17 | 1.79 | 1114.7 | 16.66 | 16.51 | 1.21 | 8.63 | 505.2 | 17.15 | 16.83 | 2.21 | 0.302 | 14.35 | 497.2 | 64.122 | 8.63 | 0 | 555.4 |
| 222 | 21-Nov-96 | 19:55 | 1.39 | 2.77 | 1183.1 | 19.7 | 19.35 | 1.44 | 12.97 | 504 | 20.49 | 19.85 | 2.35 | 0.302 | 14.35 | 497.3 | 65.252 | 12.97 | 0 | 815.3 |
| 223 | 21-Nov-96 | 20:09 | 1.54 | 3.06 | 1316.7 | 21.89 | 21.46 | 1.62 | 15.44 | 503.4 | 22.95 | 22.14 | 2.62 | 0.303 | 14.35 | 498.9 | 64.177 | 15.44 | 0 | 950.8 |
| 224 | 21-Nov-96 | 20:18 | 1.74 | 3.47 | 1408.1 | 24.72 | 24.19 | 1.82 | 17.73 | 504.1 | 25.88 | 24.92 | 2.79 | 0.302 | 14.35 | 498.6 | 63.442 | 15.32 | 2.41 | 1008.1 |
| 225 | 21-Nov-96 | 20:35 | 1.02 | 0.36 | 520.8 | 14.47 | 14.47 | 1.02 | 0.5 | 509 | 14.47 | 14.47 | 1.02 | 0.303 | 14.35 | 498.8 | 62.211 | 0.5 | 0 | 39.7 |
| 226 | 21-Nov-96 | 20:40 | 1.01 | 0.35 | 522.2 | 14.4 | 14.4 | 1.01 | 0.5 | 509.8 | 14.39 | 14.4 | 1.02 | 0.2 | 14.35 | 498.8 | 62.278 | 0.5 | 0 | 39.1 |
| 227 | 22-Nov-96 | 13:50 | 1 | 0.35 | 505.1 | 14.45 | 14.45 | 1 | 0.52 | 504.4 | 14.45 | 14.45 | 1 | 0.053 | 14.45 | 502.2 | 58.262 | 0.5 | 0.02 | 37.9 |
| 228 | 22-Nov-96 | 14:00 | 1.01 | 0.35 | 503.8 | 14.47 | 14.47 | 1.01 | 0.5 | 502 | 14.47 | 14.47 | 1 | 0.201 | 14.45 | 500.8 | 58.903 | 0.5 | 0 | 37.8 |
| 229 | 22-Nov-96 | 14:04 | 1.01 | 0.35 | 502.6 | 14.51 | 14.51 | 1.01 | 0.51 | 501.8 | 14.51 | 14.51 | 1 | 0.301 | 14.45 | 500.3 | 60.656 | 0.5 | 0.01 | 37.8 |
| 230 | 22-Nov-96 | 14:22 | 1.1 | 0.39 | 500.1 | 15.77 | 15.77 | 1.3 | 14.23 | 489 | 18.72 | 17.82 | 1.02 | 0.053 | 14.46 | 500 | 60.022 | 14.23 | 0 | 600.3 |
| 231 | 22-Nov-96 | 14:27 | 1.2 | 0.42 | 497.4 | 17.23 | 17.23 | 1.53 | 18 | 491 | 22.05 | 20.79 | 1.01 | 0.05 | 14.45 | 499.2 | 59.356 | 15.44 | 3.56 | 848.7 |
| 232 | 22-Nov-96 | 14:41 | 1.39 | 6.65 | 493 | 19.99 | 19.15 | 0.83 | 16.05 | 493.1 | 13.31 | 13.31 | 1 | 0.052 | 14.46 | 499.4 | 59.114 | 16.02 | 0.03 | 879.4 |
| 233 | 22-Nov-96 | 15:28 | 1.17 | 1.61 | 1105.7 | 16.87 | 16.75 | 1.21 | 9.71 | 500.9 | 17.48 | 17.08 | 2.21 | 0.015 | 14.45 | 499.1 | 58.388 | 9.71 | 0 | 572.6 |
| 234 | 22-Nov-96 | 15:40 | 1.39 | 2.56 | 1174.6 | 20.12 | 19.83 | 1.44 | 13.75 | 502.5 | 20.75 | 20.06 | 2.34 | 0.017 | 14.45 | 499 | 59.369 | 13.75 | 0 | 815 |
| 235 | 22-Nov-96 | 16:07 | 1.54 | 2.72 | 1317.9 | 22.22 | 21.88 | 1.61 | 16.23 | 504.8 | 23.23 | 22.34 | 2.61 | 0.015 | 14.46 | 498.6 | 58.038 | 15.39 | 0.84 | 913.7 |
| 236 | 22-Nov-96 | 16:23 | 1.74 | 3.07 | 1417.6 | 25.21 | 24.8 | 1.82 | 18.57 | 506.2 | 26.31 | 25.25 | 2.8 | 0.014 | 14.46 | 497.9 | 59.802 | 15.28 | 3.29 | 968.3 |
| 237 | 22-Nov-96 | 16:32 | 1.74 | 3.02 | 1408.5 | 25.04 | 24.64 | 1.82 | 18.61 | 506.2 | 26.25 | 25.19 | 2.78 | 0.206 | 14.46 | 497.1 | 61.235 | 15.9 | 3.31 | 980.2 |
| 238 | 22-Nov-96 | 16:35 | 1.54 | 2.73 | 1325.5 | 22.26 | 21.92 | 1.61 | 16.11 | 506.2 | 23.21 | 22.33 | 2.62 | 0.207 | 14.46 | 496.9 | 62.121 | 15.4 | 0.71 | 917.2 |
| 239 | 22-Nov-96 | 16:50 | 1.39 | 2.51 | 1183.8 | 20.08 | 19.6 | 1.44 | 13.7 | 505.1 | 20.77 | 20.07 | 2.34 | 0.207 | 14.47 | 496.4 | 62.354 | 13.7 | 0 | 812 |
| 240 | 22-Nov-96 | 17:02 | 1.17 | 1.65 | 1115.8 | 16.94 | 16.8 | 1.21 | 9.34 | 504.9 | 17.41 | 17.04 | 2.21 | 0.206 | 14.48 | 498.5 | 63.268 | 9.34 | 0 | 555.7 |
| 241 | 22-Nov-96 | 17:08 | 1.17 | 1.53 | 1116.6 | 16.85 | 16.74 | 1.21 | 9.41 | 504.4 | 17.45 | 17.07 | 2.21 | 0.301 | 14.46 | 496.2 | 63.241 | 9.41 | 0 | 556.7 |
| 242 | 22-Nov-96 | 17:13 | 1.39 | 2.44 | 1174.7 | 18.97 | 19.71 | 1.44 | 13.71 | 503.2 | 20.75 | 20.05 | 2.33 | 0.301 | 14.47 | 498.1 | 66.23 | 13.71 | 0 | 802.8 |
| 243 | 22-Nov-96 | 17:23 | 1.54 | 2.65 | 1317 | 22.05 | 21.73 | 1.61 | 16.19 | 502.7 | 23.15 | 22.27 | 2.62 | 0.301 | 14.47 | 495.7 | 65.319 | 15.46 | 0.74 | 905.7 |
| 244 | 22-Nov-96 | 17:29 | 1.74 | 3.04 | 1408.4 | 25.02 | 24.62 | 1.82 | 18.6 | 503 | 26.19 | 25.13 | 2.8 | 0.301 | 14.46 | 495.9 | 67.492 | 15.35 | 3.25 | 959 |
| 245 | 22-Nov-96 | 18:25 | 1 | 0.35 | 511.8 | 14.47 | 14.47 | 1 | 0.5 | 507.4 | 14.47 | 14.47 | 1.01 | 0.016 | 14.47 | 500.4 | 53.775 | 0.5 | 0 | 39.2 |
| 246 | 22-Nov-96 | 18:34 | 1.01 | 0.35 | 512.9 | 14.52 | 14.52 | 1.01 | 0.6 | 504.9 | 14.52 | 14.52 | 1.02 | 0.2 | 14.47 | 499.4 | 59.276 | 0.5 | 0 | 39.2 |
| 247 | 22-Nov-96 | 18:38 | 1.02 | 0.35 | 511.1 | 14.6 | 14.6 | 1.02 | 0.6 | 504.9 | 14.6 | 14.6 | 1.01 | 0.304 | 14.47 | 498 | 62.233 | 0.5 | 0 | 38.1 |
| 248 | 22-Nov-96 | 18:55 | 1.16 | 0.41 | 498.4 | 17 | 16.99 | 1.53 | 19.01 | 494.4 | 22.07 | 20.8 | 1.01 | 0.017 | 14.46 | 497.3 | 64.159 | 15.38 | 9.82 | 848.2 |
| 249 | 22-Nov-96 | 19:05 | 1.39 | 6.78 | 494.4 | 20.11 | 19.26 | 0.92 | 0.45 | 494.9 | 13.28 | 13.28 | 1 | 0.016 | 14.46 | 498.9 | 64.888 | 0.45 | 0 | 328.8 |

| | | | | | | | | | | | | | | | | | | | | |
|-----|----------|-------|------|-------|--------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|--------|-------|------|--------|
| 450 | 5-Dec-96 | 15:03 | 1.74 | 3.06 | 1393.5 | 24.89 | 24.28 | 1.82 | 16.51 | 498.8 | 25.77 | 24.74 | 2.78 | 0.2 | 14.2 | 498.8 | 58.938 | 15.37 | 3.15 | 1988.5 |
| 451 | 5-Dec-96 | 15:13 | 1.54 | 2.7 | 1313.2 | 21.84 | 21.5 | 1.81 | 16.04 | 501.5 | 22.81 | 21.95 | 2.92 | 0.2 | 14.2 | 498.8 | 59.227 | 15.45 | 3.61 | 1921.4 |
| 452 | 5-Dec-96 | 15:18 | 1.54 | 2.7 | 1313 | 21.84 | 21.5 | 1.81 | 16.04 | 502 | 22.82 | 21.96 | 2.92 | 0.2 | 14.2 | 498.8 | 59.888 | 15.45 | 3.61 | 1922 |
| 453 | 5-Dec-96 | 15:24 | 1.38 | 2.48 | 1178.4 | 19.72 | 19.44 | 1.44 | 13.56 | 503 | 20.38 | 19.71 | 2.34 | 0.2 | 14.19 | 498.8 | 59.593 | 15.52 | 3.21 | 1916.1 |
| 454 | 5-Dec-96 | 15:37 | 1.74 | 3.63 | 1409.1 | 24.71 | 24.3 | 1.82 | 16.5 | 503.8 | 25.86 | 24.81 | 2.6 | 0.005 | 14.19 | 498.8 | 58.888 | 15.29 | 3.21 | 1972.6 |
| 455 | 5-Dec-96 | 15:42 | 1.54 | 2.7 | 1322.4 | 21.8 | 21.85 | 1.61 | 18.12 | 504.1 | 22.91 | 22.03 | 2.82 | 0.005 | 14.19 | 498.1 | 58.153 | 15.36 | 0.78 | 1924.2 |
| 456 | 5-Dec-96 | 15:53 | 1.39 | 2.99 | 1178.5 | 19.75 | 19.47 | 1.44 | 13.75 | 503.8 | 20.48 | 19.78 | 2.34 | 0.005 | 14.18 | 499.3 | 58.582 | 13.69 | 0.05 | 1922.5 |
| 457 | 5-Dec-96 | 16:09 | 1 | 18.34 | 521.2 | 14.19 | 14.19 | 1 | 10.81 | 511.9 | 14.19 | 14.19 | 1.02 | 0.086 | 14.19 | 503.8 | 44.882 | 0.48 | 0.82 | 38.5 |
| 458 | 5-Dec-96 | 16:55 | 1.01 | 0.34 | 521.9 | 14.23 | 14.23 | 1.01 | 0.5 | 510.2 | 14.23 | 14.23 | 1.03 | 0.281 | 14.19 | 503.4 | 50.615 | 0.48 | 0.82 | 38.5 |
| 459 | 5-Dec-96 | 17:01 | 1.01 | 0.34 | 518.8 | 14.27 | 14.27 | 1.01 | 0.5 | 503.7 | 14.27 | 14.27 | 1.02 | 0.3 | 14.19 | 502.2 | 54.284 | 0.49 | 0.82 | 38.4 |
| 460 | 5-Dec-96 | 17:34 | 1.39 | 2.71 | 1165.5 | 18.57 | 18.24 | 1.44 | 13.21 | 497.7 | 20.34 | 19.7 | 2.36 | 0.301 | 14.17 | 499.6 | 63.48 | 13.15 | 0.06 | 315.1 |
| 461 | 5-Dec-96 | 17:38 | 1.54 | 2.97 | 1303.5 | 21.82 | 21.27 | 1.61 | 15.89 | 498.2 | 22.73 | 21.92 | 2.82 | 0.3 | 14.17 | 498.3 | 65.345 | 15.56 | 0.04 | 348.3 |
| 462 | 5-Dec-96 | 17:47 | 1.74 | 3.36 | 1393.9 | 24.48 | 24.1 | 1.82 | 17.89 | 498.9 | 25.68 | 24.71 | 2.79 | 0.3 | 14.16 | 499.1 | 65.891 | 15.41 | 2.48 | 1002.4 |
| 463 | 5-Dec-96 | 18:00 | 1.74 | 3.36 | 1405.1 | 24.61 | 24.1 | 1.82 | 17.89 | 503.7 | 25.78 | 24.8 | 2.79 | 0.2 | 14.16 | 499.2 | 65.284 | 15.39 | 2.57 | 1908.1 |
| 464 | 5-Dec-96 | 18:10 | 1.54 | 3.04 | 1328 | 21.82 | 21.39 | 1.61 | 15.47 | 505.2 | 22.76 | 21.95 | 2.82 | 0.2 | 14.17 | 499.3 | 65.857 | 15.4 | 0.06 | 961 |
| 465 | 5-Dec-96 | 18:19 | 1.39 | 2.75 | 1177.4 | 18.63 | 18.26 | 1.44 | 13.21 | 504.9 | 20.38 | 19.73 | 2.39 | 0.2 | 14.16 | 499.2 | 67.86 | 13.15 | 0.06 | 827.5 |
| 466 | 5-Dec-96 | 18:39 | 1.74 | 3.4 | 1413.3 | 24.88 | 24.17 | 1.82 | 17.89 | 505.9 | 25.84 | 24.86 | 2.86 | 0.082 | 14.16 | 498.3 | 72.547 | 15.31 | 2.58 | 1014.6 |
| 467 | 5-Dec-96 | 18:47 | 1.64 | 3.22 | 1328.8 | 21.81 | 21.39 | 1.61 | 15.48 | 505.8 | 22.76 | 21.95 | 2.86 | 0.083 | 14.16 | 498.4 | 73.559 | 15.42 | 0.07 | 990.2 |
| 468 | 5-Dec-96 | 18:55 | 1.39 | 2.77 | 1185.5 | 18.69 | 18.34 | 1.44 | 13.28 | 505.5 | 20.44 | 19.78 | 2.35 | 0.093 | 14.16 | 498.4 | 74.125 | 13.22 | 0.96 | 834.8 |
| 469 | 5-Dec-96 | 20:42 | 1.39 | 2.88 | 1165.8 | 18.66 | 18.26 | 1.44 | 13.08 | 498.8 | 20.44 | 19.81 | 2.34 | 0.094 | 14.16 | 504.1 | 78.302 | 13.04 | 0.94 | 827.2 |
| 470 | 5-Dec-96 | 20:54 | 1.54 | 3.14 | 1303.9 | 21.83 | 21.38 | 1.82 | 16.43 | 497 | 22.87 | 22.07 | 2.82 | 0.094 | 14.16 | 502.2 | 80.832 | 15.4 | 0.93 | 858.3 |
| 471 | 5-Dec-96 | 21:01 | 1.74 | 3.88 | 1390.8 | 24.68 | 24.13 | 1.82 | 17.85 | 499.7 | 25.71 | 24.77 | 2.79 | 0.2 | 14.16 | 501.4 | 82.183 | 15.38 | 2.28 | 1028.5 |
| 472 | 5-Dec-96 | 21:13 | 1.74 | 3.55 | 1394.8 | 24.59 | 24.04 | 1.82 | 17.85 | 499.7 | 25.71 | 24.77 | 2.79 | 0.2 | 14.16 | 499.8 | 84.018 | 15.45 | 2.05 | 1022.5 |
| 473 | 5-Dec-96 | 21:31 | 1.85 | 3.18 | 1315.2 | 21.82 | 21.86 | 1.61 | 15.15 | 502.4 | 22.74 | 21.96 | 2.82 | 0.2 | 14.16 | 498.3 | 86.485 | 15.11 | 0.04 | 859.8 |
| 474 | 5-Dec-96 | 21:41 | 1.4 | 2.81 | 1177.1 | 19.71 | 19.33 | 1.44 | 12.83 | 502.5 | 20.37 | 19.75 | 2.34 | 0.2 | 14.15 | 497.8 | 87.333 | 12.82 | 0.01 | 828.6 |
| 475 | 5-Dec-96 | 21:49 | 1.39 | 2.85 | 1182.2 | 18.59 | 18.22 | 1.44 | 12.58 | 502.8 | 20.23 | 19.83 | 2.35 | 0.3 | 14.15 | 497.1 | 89.858 | 12.58 | 0 | 817.4 |
| 476 | 5-Dec-96 | 21:59 | 1.54 | 3.07 | 1323.8 | 21.86 | 21.23 | 1.82 | 15.17 | 504.4 | 22.73 | 21.95 | 2.62 | 0.3 | 14.15 | 488.7 | 90.223 | 15.13 | 0.04 | 954.8 |
| 477 | 5-Dec-96 | 22:09 | 1.74 | 3.51 | 1415.5 | 24.49 | 23.95 | 1.82 | 17.3 | 508.4 | 25.81 | 24.88 | 2.8 | 0.3 | 14.15 | 498.8 | 99.497 | 15.38 | 1.92 | 11929 |

Acoustic Data

[Compiled according to the listing of nozzles and mixers in Table 3.1; e.g., first is for 100%L, CONF at condition A, B, ...,L (ref. Table 3.2), second is for 100%L, 12CL at condition A, B, ..., L etc.]

100%L, CONF

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

[illegible]

194

Data sample 14.70 psia
Data sample 537.0 F
Data sample 70.00%
Data scale !

[illegible]

[illegible]

| | |
|------------|------------|
| Data ambou | 14.30 pnia |
| Data ambou | 536.0 R |
| Data ambou | 70.00% |
| Data scale | 1 |

distance: (f) 150

| roll angle (°) | yaw angle (°) |
|----------------|---------------|
| 0 | 55 |

| frequency | 55 |
|-----------|-------|
| 80 | 75.48 |
| 100 | 79.2 |

| | |
|-----|-------|
| 100 | 76.7 |
| 130 | 78.33 |
| 160 | 79.12 |

200 80.43
250 80.48

| | |
|-----|-------|
| 320 | 60.33 |
| 400 | 77.92 |

| | |
|-----|-------|
| 500 | 77.97 |
| 630 | 77.36 |
| 770 | 77.21 |

| | |
|------|-------|
| 800 | 77.54 |
| 1000 | 77.08 |
| 1200 | 76.33 |

| | |
|------|-------|
| 1300 | 75.5 |
| 1600 | 74.74 |
| 2000 | |

| | |
|------|-------|
| 2500 | 73.58 |
| 3200 | 72.58 |

| | |
|------|-------|
| 4000 | 71.44 |
| 5000 | 69.69 |

| | |
|-------|-------|
| 6300 | 67.88 |
| 8000 | 68.85 |
| 10000 | 69.81 |

QASPL 80.24

[illegible]

| Year | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 | 2077 | 2078 | 2079 | 2080 | 2081 | 2082 | 2083 | 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------|
| 8 | 92.37 | 93.11 | 93.71 | 94.25 | 94.87 | 95.5 | 96.71 | 97.16 | 96.73 | 98.09 | 100.94 | 102.27 | 103.28 | 104.07 | 104.58 | 104.98 | 105.21 | 105.28 | 105.11 | 104.71 | 104.11 | 103.31 | 102.31 | 101.11 | 99.71 | 98.11 | 96.31 | 94.31 | 92.11 | 89.71 | 87.11 | 84.31 | 81.31 | 78.11 | 74.71 | 71.11 | 67.31 | 63.31 | 59.11 | 54.71 | 50.11 | 45.31 | 40.31 | 35.11 | 29.71 | 24.11 | 18.31 | 12.31 | 6.11 | 0.11 | -4.11 | -8.11 | -12.11 | -16.11 | -20.11 | -24.11 | -28.11 | -32.11 | -36.11 | -40.11 | -44.11 | -48.11 | -52.11 | -56.11 | -60.11 | -64.11 | -68.11 | -72.11 | -76.11 | -80.11 | -84.11 | -88.11 | -92.11 | -96.11 | -100.11 | -104.11 | -108.11 | -112.11 | -116.11 | -120.11 | -124.11 | -128.11 | -132.11 | -136.11 | -140.11 | -144.11 | -148.11 | -152.11 | -156.11 | -160.11 | -164.11 | -168.11 | -172.11 | -176.11 | -180.11 | -184.11 | -188.11 | -192.11 | -196.11 | -200.11 | -204.11 | -208.11 | -212.11 | -216.11 | -220.11 | -224.11 | -228.11 | -232.11 | -236.11 | -240.11 | -244.11 | -248.11 | -252.11 | -256.11 | -260.11 | -264.11 | -268.11 | -272.11 | -276.11 | -280.11 | -284.11 | -288.11 | -292.11 | -296.11 | -300.11 | -304.11 | -308.11 | -312.11 | -316.11 | -320.11 | -324.11 | -328.11 | -332.11 | -336.11 | -340.11 | -344.11 | -348.11 | -352.11 | -356.11 | -360.11 | -364.11 | -368.11 | -372.11 | -376.11 | -380.11 | -384.11 | -388.11 | -392.11 | -396.11 | -400.11 | -404.11 | -408.11 | -412.11 | -416.11 | -420.11 | -424.11 | -428.11 | -432.11 | -436.11 | -440.11 | -444.11 | -448.11 | -452.11 | -456.11 | -460.11 | -464.11 | -468.11 | -472.11 | -476.11 | -480.11 | -484.11 | -488.11 | -492.11 | -496.11 | -500.11 | -504.11 | -508.11 | -512.11 | -516.11 | -520.11 | -524.11 | -528.11 | -532.11 | -536.11 | -540.11 | -544.11 | -548.11 | -552.11 | -556.11 | -560.11 | -564.11 | -568.11 | -572.11 | -576.11 | -580.11 | -584.11 | -588.11 | -592.11 | -596.11 | -600.11 | -604.11 | -608.11 | -612.11 | -616.11 | -620.11 | -624.11 | -628.11 | -632.11 | -636.11 | -640.11 | -644.11 | -648.11 | -652.11 | -656.11 | -660.11 | -664.11 | -668.11 | -672.11 | -676.11 | -680.11 | -684.11 | -688.11 | -692.11 | -696.11 | -700.11 | -704.11 | -708.11 | -712.11 | -716.11 | -720.11 | -724.11 | -728.11 | -732.11 | -736.11 | -740.11 | -744.11 | -748.11 | -752.11 | -756.11 | -760.11 | -764.11 | -768.11 | -772.11 | -776.11 | -780.11 | -784.11 | -788.11 | -792.11 | -796.11 | -800.11 | -804.11 | -808.11 | -812.11 | -816 |

196

Data ambi 14.70 psia
Data ambi 537.0 R
Data ambi 70.00%
Data scale 1

| Distance (km) | Year | Frequency | 1950 | 1955 | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 | 2055 | 2060 | 2065 | 2070 | 2075 | 2080 | 2085 | 2090 | 2095 | 2100 | 2105 | 2110 | 2115 | 2120 | 2125 | 2130 | 2135 | 2140 | 2145 | 2150 | 2155 | 2160 | 2165 | 2170 | 2175 | 2180 | 2185 | 2190 | 2195 | 2200 | 2205 | 2210 | 2215 | 2220 | 2225 | 2230 | 2235 | 2240 | 2245 | 2250 | 2255 | 2260 | 2265 | 2270 | 2275 | 2280 | 2285 | 2290 | 2295 | 2300 | 2305 | 2310 | 2315 | 2320 | 2325 | 2330 | 2335 | 2340 | 2345 | 2350 | 2355 | 2360 | 2365 | 2370 | 2375 | 2380 | 2385 | 2390 | 2395 | 2400 | 2405 | 2410 | 2415 | 2420 | 2425 | 2430 | 2435 | 2440 | 2445 | 2450 | 2455 | 2460 | 2465 | 2470 | 2475 | 2480 | 2485 | 2490 | 2495 | 2500 | 2505 | 2510 | 2515 | 2520 | 2525 | 2530 | 2535 | 2540 | 2545 | 2550 | 2555 | 2560 | 2565 | 2570 | 2575 | 2580 | 2585 | 2590 | 2595 | 2600 | 2605 | 2610 | 2615 | 2620 | 2625 | 2630 | 2635 | 2640 | 2645 | 2650 | 2655 | 2660 | 2665 | 2670 | 2675 | 2680 | 2685 | 2690 | 2695 | 2700 | 2705 | 2710 | 2715 | 2720 | 2725 | 2730 | 2735 | 2740 | 2745 | 2750 | 2755 | 2760 | 2765 | 2770 | 2775 | 2780 | 2785 | 2790 | 2795 | 2800 | 2805 | 2810 | 2815 | 2820 | 2825 | 2830 | 2835 | 2840 | 2845 | 2850 | 2855 | 2860 | 2865 | 2870 | 2875 | 2880 | 2885 | 2890 | 2895 | 2900 | 2905 | 2910 | 2915 | 2920 | 2925 | 2930 | 2935 | 2940 | 2945 | 2950 | 2955 | 2960 | 2965 | 2970 | 2975 | 2980 | 2985 | 2990 | 2995 | 3000 | 3005 | 3010 | 3015 | 3020 | 3025 | 3030 | 3035 | 3040 | 3045 | 3050 | 3055 | 3060 | 3065 | 3070 | 3075 | 3080 | 3085 | 3090 | 3095 | 3100 | 3105 | 3110 | 3115 | 3120 | 3125 | 3130 | 3135 | 3140 | 3145 | 3150 | 3155 | 3160 | 3165 | 3170 | 3175 | 3180 | 3185 | 3190 | 3195 | 3200 | 3205 | 3210 | 3215 | 3220 | 3225 | 3230 | 3235 | 3240 | 3245 | 3250 | 3255 | 3260 | 3265 | 3270 | 3275 | 3280 | 3285 | 3290 | 3295 | 3300 | 3305 | 3310 | 3315 | 3320 | 3325 | 3330 | 3335 | 3340 | 3345 | 3350 | 3355 | 3360 | 3365 | 3370 | 3375 | 3380 | 3385 | 3390 | 3395 | 3400 | 3405 | 3410 | 3415 | 3420 | 3425 | 3430 | 3435 | 3440 | 3445 | 3450 | 3455 | 3460 | 3465 | 3470 | 3475 | 3480 | 3485 | 3490 | 3495 | 3500 | 3505 | 3510 | 3515 | 3520 | 3525 | 3530 | 3535 | 3540 | 3545 | 3550 | 3555 | 3560 | 3565 | 3570 | 3575 | 3580 | 3585 | 3590 | 3595 | 3600 | 3605 | 3610 | 3615 | 3620 | 3625 | 3630 | 3635 | 3640 | 3645 | 3650 | 3655 | 3660 | 3665 | 3670 | 3675 | 3680 | 3685 | 3690 | 3695 | 3700 | 3705 | 3710 | 3715 | 3720 | 3725 | 3730 | 3735 | 3740 | 3745 | 3750 | 3755 | 3760 | 3765 | 3770 | 3775 | 3780 | 3785 | 3790 | 3795 | 3800 | 3805 | 3810 | 3815 | 3820 | 3825 | 3830 | 3835 | 3840 | 3845 | 3850 | 3855 | 3860 | 3865 | 3870 | 3875 | 3880 | 3885 | 3890 | 3895 | 3900 | 3905 | 3910 | 3915 | 3920 | 3925 | 3930 | 3935 | 3940 | 3945 | 3950 | 3955 | 3960 | 3965 | 3970 | 3975 |
|---------------|------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|---------------|------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

| | |
|------------|------------------------------|
| prog | 290 |
| run | 1 |
| test_prog | Alison96 |
| test_num | 3 |
| test_fac1 | LeRC APL |
| test_cust | Alison |
| lead_bero | Kathy Boyd |
| lead_acou | Kathy Boyd |
| lead_engin | Ray Cusner |
| natidb | NATR full wedge |
| erbit | IER full external supplement |

...Scenario: 150 foot arc; 77F, 70%; Full scale; Third-octave SPL
Processing date: Wed Aug 20 02:12:37 1997

Data enable 14.30 psia
Data enable 536.0 R
Data enable 70.00%
Data scale 1

[illegible]

198

Data embles 14.70 psig
Data embles \$37.0 R
Data embles 70.00%

[illegible]

199

| | |
|-----------------------|--|
| Data ambik 14.30 pela | |
| Data ambik 5.38 0 R | |
| Data ambik 70 00% | |

200

[illegible]

[illegible]

Figure 6

Call 1-800-441-5387

70.00%

| Year | Scale | 1 |
|------|-------|---|
|------|-------|---|

11

Distance: (1150

55 **epidemiol. med. hyg.**

cell angle () aperture

frequency

59.78 08

| | |
|-------|-----|
| 50.25 | 100 |
| 49.85 | 100 |

| | |
|-----|-------|
| 130 | 60.23 |
| 150 | 59.83 |

| | |
|-----|-------|
| 100 | 30.57 |
| 200 | 59.42 |

250 04.07

320 64.68

400 83.48

500 84.38

630 63,06

600

| | |
|-------|-------|
| 10001 | 61.96 |
| 1350 | 61.22 |

| | |
|-------|-------|
| 1,000 | 59.72 |
| 1,500 | 61.28 |

1000 50.12

2000 50.40

2500 57.43

3200 57.37

4000 58.39

5000 55.01

6300 58.32

| | |
|-------|-------|
| 1,000 | 53.96 |
| 1,000 | 53.47 |

000001 74.06 71.72

UNOFFICIAL

202

[illegible]

203

Date embil 14.30 peia
Date embil 538.0 R
Date embil 70.00%
Date scale 1

| new angle | roll angle (°) | frequency |
|-----------|----------------|-----------|
| 33 | 0 | 55 |

| | |
|-----|-------|
| 130 | 71.67 |
| 160 | 73.88 |
| 200 | 73.02 |

| | |
|-----|-------|
| 400 | 73.1 |
| 500 | 72.62 |
| 630 | 72.03 |

| | |
|------|-------|
| 1300 | 70.82 |
| 1600 | 70.83 |
| 2000 | 70.43 |

| | |
|------|-------|
| 5000 | 67.72 |
| 6300 | 67.49 |

5

[illegible]

21:30:24
 Scenario: 150 foot arc; 77F, 70%; Full scale; Third-octave SPL
 Mon Aug 18 17:09:18 1997
 Procession date:

210

[illegible]

Data ambil 14.30 pada
Data ambil 5.38.0 A
Data ambil 70.00%

Data scale: 1

Distance: 1150

raw angle

Frequency

80 60 30

| | |
|-----|-------|
| 100 | 65.79 |
|-----|-------|

| | |
|-----|-------|
| 130 | 88 79 |
| 150 | 80 75 |

| | |
|-------|-----|
| 59.09 | 200 |
| 59.10 | 100 |

250 70 42

320 72 00

| | |
|-----|-------|
| 400 | 71.84 |
| 500 | 71.55 |

500 71.59
630 71.28

70.9%

1000 70 73

1300 69 72

| | |
|------|-------|
| 1600 | 69.68 |
| 2000 | 70.53 |

2500 69 99

3200 70 27

| | |
|------|-------|
| 6000 | 59.84 |
| 5000 | 59.79 |

| | |
|------|-------|
| 5000 | 69.70 |
| 6300 | 69.57 |

8000 69.1

10000 9976

OASPL **83 48**

[illegible]

[illegible][illegible]

[illegible]

216

100%L, 12CL

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

219

Data sample 14.70 para
Data sample 537.0 R
Data sample 70.00%
Data scale 1

[illegible]

221

222

| | | | | | | | | | |
|-------------------------|--|--|--|--|--|--|--|--|--|
| Dada embra 14.30 para | | | | | | | | | |
| Dada embra 55.00 para | | | | | | | | | |
| Dada embra 70.00 para | | | | | | | | | |
| Dada embra 85.00 para | | | | | | | | | |
| Dada embra 100.00 para | | | | | | | | | |
| Dada embra 115.00 para | | | | | | | | | |
| Dada embra 130.00 para | | | | | | | | | |
| Dada embra 145.00 para | | | | | | | | | |
| Dada embra 160.00 para | | | | | | | | | |
| Dada embra 175.00 para | | | | | | | | | |
| Dada embra 190.00 para | | | | | | | | | |
| Dada embra 205.00 para | | | | | | | | | |
| Dada embra 220.00 para | | | | | | | | | |
| Dada embra 235.00 para | | | | | | | | | |
| Dada embra 250.00 para | | | | | | | | | |
| Dada embra 265.00 para | | | | | | | | | |
| Dada embra 280.00 para | | | | | | | | | |
| Dada embra 295.00 para | | | | | | | | | |
| Dada embra 310.00 para | | | | | | | | | |
| Dada embra 325.00 para | | | | | | | | | |
| Dada embra 340.00 para | | | | | | | | | |
| Dada embra 355.00 para | | | | | | | | | |
| Dada embra 370.00 para | | | | | | | | | |
| Dada embra 385.00 para | | | | | | | | | |
| Dada embra 400.00 para | | | | | | | | | |
| Dada embra 415.00 para | | | | | | | | | |
| Dada embra 430.00 para | | | | | | | | | |
| Dada embra 445.00 para | | | | | | | | | |
| Dada embra 460.00 para | | | | | | | | | |
| Dada embra 475.00 para | | | | | | | | | |
| Dada embra 490.00 para | | | | | | | | | |
| Dada embra 505.00 para | | | | | | | | | |
| Dada embra 520.00 para | | | | | | | | | |
| Dada embra 535.00 para | | | | | | | | | |
| Dada embra 550.00 para | | | | | | | | | |
| Dada embra 565.00 para | | | | | | | | | |
| Dada embra 580.00 para | | | | | | | | | |
| Dada embra 595.00 para | | | | | | | | | |
| Dada embra 610.00 para | | | | | | | | | |
| Dada embra 625.00 para | | | | | | | | | |
| Dada embra 640.00 para | | | | | | | | | |
| Dada embra 655.00 para | | | | | | | | | |
| Dada embra 670.00 para | | | | | | | | | |
| Dada embra 685.00 para | | | | | | | | | |
| Dada embra 700.00 para | | | | | | | | | |
| Dada embra 715.00 para | | | | | | | | | |
| Dada embra 730.00 para | | | | | | | | | |
| Dada embra 745.00 para | | | | | | | | | |
| Dada embra 760.00 para | | | | | | | | | |
| Dada embra 775.00 para | | | | | | | | | |
| Dada embra 790.00 para | | | | | | | | | |
| Dada embra 805.00 para | | | | | | | | | |
| Dada embra 820.00 para | | | | | | | | | |
| Dada embra 835.00 para | | | | | | | | | |
| Dada embra 850.00 para | | | | | | | | | |
| Dada embra 865.00 para | | | | | | | | | |
| Dada embra 880.00 para | | | | | | | | | |
| Dada embra 895.00 para | | | | | | | | | |
| Dada embra 910.00 para | | | | | | | | | |
| Dada embra 925.00 para | | | | | | | | | |
| Dada embra 940.00 para | | | | | | | | | |
| Dada embra 955.00 para | | | | | | | | | |
| Dada embra 970.00 para | | | | | | | | | |
| Dada embra 985.00 para | | | | | | | | | |
| Dada embra 1000.00 para | | | | | | | | | |

[illegible]

225

[illegible]

[illegible]

[illegible]

[illegible]

| dog | 429 |
|-----------|----------|
| iron prog | 41.228 |
| allong | 35.02 |
| lead run | 78.35 |
| lead run | 4 |
| lead lead | 842.03 |
| lead lead | 0.20318 |
| lead lead | 14.4507 |
| lead lead | 486.929 |
| lead lead | 75.88 |
| lead lead | 0 |
| lead lead | 1.538 |
| lead lead | 1.61 |
| lead lead | 22.2986 |
| lead lead | 23.2856 |
| lead lead | 15.879 |
| lead lead | 1336.87 |
| lead lead | 510.841 |
| lead lead | 23.1056 |
| lead lead | 639.847 |
| lead lead | 0.759714 |
| lead lead | 17833.6 |
| lead lead | 28 |
| lead lead | 410 |
| lead lead | 0.04 |
| lead lead | 17.2313 |
| lead lead | 0.04 |
| lead lead | 0.04 |
| lead lead | 17.2313 |

6%; Full scale; Third-octave SPL
Mon Aug 18 17:17:59 1997

Date umbra 14.30 psia

Date embodi 536.0 R

| Parameter | Value |
|------------|--------|
| Data error | 70.00% |
| Data scale | 1 |

1

| | |
|--------------|-----|
| distance: (i | 150 |
| system 1000 | 55 |

| roll angle (°) | 0 |
|----------------|---|
|----------------|---|

| | |
|-----------|------|
| frequency | 55 |
| 80 | 73 2 |

| | |
|-----|-------|
| 60 | 75.2 |
| 100 | 75.30 |

130 74 81

| | |
|-----|-------|
| 150 | 76.06 |
| 200 | 76.27 |

250 77.1

| | |
|-----|-------|
| 320 | 76.39 |
| 400 | 77.85 |

500 70.39

630 70 29
600 70 67

| | |
|------|-------|
| 600 | 70.97 |
| 1000 | 70.12 |

| | |
|------|------|
| 1300 | 77.0 |
| 1300 | 77.0 |

| | |
|------|-------|
| 1600 | 77.45 |
| 2000 | 77.36 |

2500 75.00

| | |
|------|-------|
| 3200 | 75.68 |
| 4000 | 74.89 |

5000 73.04

6300 72.9
6300 72.97

100000 70.5

00.85
OASPL

[illegible]

[illegible]

Data ambient 14.70 psia
Data ambient 537.0 R
Data ambient 70.00%
Data scale 1

| Observer: (| 1831.16 | 1732.05 | 1805.07 | 1504.27 | 1552.81 | 1523.14 | 1500 | 1506.72 | 1523.14 | 1505.81 | 1526.11 | 1508.27 | 1655.07 | 1732.05 | 1831.16 | 1608.11 | 2121.32 | 2333.59 | 2415.17 | 3000 | 3549.3 | 4395.71 | 5795.53 |
|-------------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|--------|---------|---------|
| year angle | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | |
| roll angle | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | |
| freq | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | |
| 1 | 52.44 | 53.87 | 54.7 | 54.94 | 54.25 | 54.47 | 54.90 | 55.58 | 56.22 | 56.83 | 57.44 | 58.02 | 57.67 | 57.92 | 57.92 | 58.07 | 58.15 | 58.17 | 58.15 | 58.17 | 58.15 | 185 PWS | |
| 2 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 3 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 4 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 5 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 6 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 7 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 8 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 9 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 10 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 11 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 12 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 13 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 14 | 50.44 | 52.01 | 52.87 | 54.00 | 54.55 | 54.80 | 55.36 | 55.86 | 56.35 | 56.82 | 57.28 | 57.69 | 57.61 | 57.74 | 57.38 | 57.38 | 57.17 | 57.03 | 57.03 | 57.03 | 56.86 | 59.84 | |
| 15 | 50.44 | 52. | | | | | | | | | | | | | | | | | | | | | |

232

[illegible]

[illegible]

235

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| Data ambig | 14.70 paisa |
| Data ambig | 537.0 R |
| Data ambig | 70.00% |

[illegible]

ing 427
 test_eng Allison
 test_run 3
 test_fuel LeRC APL
 test_cool Allison
 test_aero Kathy Boyd
 test_accu Kathy Boyd
 test_eng Ray Cleaver
 test_fuel NATR full wedge
 test_cool JER w external supplement
 test_aero CONN
 test_accu BASE
 test_eng 14.226
 test_fuel 35.02
 test_cool 78.39
 test_aero 4
 test_accu 84.4
 test_eng 0.30135
 test_fuel 14.3999
 test_cool 495.929
 test_aero 80.02
 test_accu 154.0
 test_eng 1.818
 test_fuel 22.2786
 test_cool 23.299
 test_aero 3.009
 test_accu 18.03
 test_eng 1338.13
 test_fuel 507.648
 test_cool 23.1375
 test_aero 658.585
 test_accu 0.761826
 test_eng 17972.8
 test_fuel 411
 test_cool 04 Dec 98
 test_aero 18:00:37
 test_accu 04 Dec 98
 test_eng 18:00:37
 test_fuel 18:00:37
 test_cool 18:00:37
 test_aero 18:00:37
 test_accu 18:00:37

--Scenario: 150 foot arc: 77F, 70% Full scale: Third octave SPL

Processing date: Wed Aug 27 10:54:20 1997

Data arch: 14.20 min

Data arch: 528.0 B

Data arch: 70.00%

Data arch: 1

distance: 150

view angle: 55

rot angle: 0

frequency: 80

100

120

140

160

180

200

220

240

260

280

300

320

340

360

380

400

420

440

460

480

500

520

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620

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660

680

700

720

740

760

780

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840

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1000

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1080

1100

1120

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1160

1180

1200

1220

239

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|------------|------------|
| Data ambte | 14.70 pais |
| Data ambte | 537.0 R |
| Data ambte | 70.00% |
| Data scale | 1 |

240

[illegible]

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|-----------|---------------------------|
| rdg | 428 |
| run | 1 |
| test_prog | Alison86 |
| test_num | 3 |
| test_fac1 | LeRC AP1 |
| test_cust | Alison |
| lead_hero | Kathy Boyd |
| lead_acct | Kathy Boyd |
| lead_engr | Ray Cassner |
| matbld | NATR full wedge |
| prbm | IFR attempted fulfillment |

Scenario: Fly-over, full-scale, 1500' altitude, standard day
Mon Aug 18 15:40:45 1997
Decommission date:
bitchime 18:05:14

| | |
|-------------|------------|
| Data ambre | 14.70 pela |
| Data ambre | 537.0 Ff |
| Data ambre | 70.00% |
| Data escala | 1 |

| Distance (ft) | 1031.16 | 1720.05 | 1665.07 | 1596.27 | 1552.81 | 1523.14 | 1506.73 | 1500 | 1505.73 | 1522.14 | 1552.81 | 1596.27 | 1665.07 | 1720.05 | 1831.16 | 1958.11 | 2121.32 | 2333.58 | 2615.17 | 3000 | 3548.3 | 4383.71 | 5795.55 |
|----------------|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|---------|
| Distance (m) | 313.36 | 524.25 | 507.58 | 484.00 | 469.98 | 460.80 | 458.00 | 455.00 | 455.00 | 458.00 | 469.98 | 484.00 | 507.58 | 524.25 | 561.80 | 646.00 | 646.00 | 710.32 | 800.67 | 914.40 | 1066.80 | 1399.99 | |
| Altitude (ft) | 1031.16 | 1720.05 | 1665.07 | 1596.27 | 1552.81 | 1523.14 | 1506.73 | 1500 | 1505.73 | 1522.14 | 1552.81 | 1596.27 | 1665.07 | 1720.05 | 1831.16 | 1958.11 | 2121.32 | 2333.58 | 2615.17 | 3000 | 3548.3 | 4383.71 | 5795.55 |
| Altitude (m) | 313.36 | 524.25 | 507.58 | 484.00 | 469.98 | 460.80 | 458.00 | 455.00 | 455.00 | 458.00 | 469.98 | 484.00 | 507.58 | 524.25 | 561.80 | 646.00 | 646.00 | 710.32 | 800.67 | 914.40 | 1066.80 | 1399.99 | |
| Wind angle (°) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Frequency | 55 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 1 | 53.88 | 54.13 | 57.47 | 58.85 | 59.78 | 60.58 | 61.25 | 61.80 | 62.25 | 62.60 | 62.85 | 63.05 | 63.15 | 63.15 | 63.10 | 62.95 | 62.75 | 62.50 | 62.25 | 62.00 | 61.75 | 61.50 | 61.25 |
| 2 | 56.84 | 57.09 | 57.85 | 58.72 | 59.68 | 60.58 | 61.45 | 62.25 | 63.00 | 63.70 | 64.35 | 64.95 | 65.50 | 66.00 | 66.45 | 66.85 | 67.20 | 67.50 | 67.75 | 68.00 | 68.25 | 68.50 | 68.75 |
| 3 | 58.84 | 59.09 | 59.85 | 60.72 | 61.68 | 62.58 | 63.45 | 64.25 | 65.00 | 65.70 | 66.35 | 66.95 | 67.50 | 68.00 | 68.45 | 68.85 | 69.20 | 69.50 | 69.75 | 70.00 | 70.25 | 70.50 | 70.75 |
| 4 | 60.84 | 61.09 | 61.85 | 62.72 | 63.68 | 64.58 | 65.45 | 66.25 | 67.00 | 67.70 | 68.35 | 68.95 | 69.50 | 70.00 | 70.45 | 70.85 | 71.20 | 71.50 | 71.75 | 72.00 | 72.25 | 72.50 | 72.75 |
| 5 | 62.84 | 63.09 | 63.85 | 64.72 | 65.68 | 66.58 | 67.45 | 68.25 | 69.00 | 69.70 | 70.35 | 70.95 | 71.50 | 72.00 | 72.45 | 72.85 | 73.20 | 73.50 | 73.75 | 74.00 | 74.25 | 74.50 | 74.75 |
| 6 | 64.84 | 65.09 | 65.85 | 66.72 | 67.68 | 68.58 | 69.45 | 70.25 | 71.00 | 71.70 | 72.35 | 72.95 | 73.50 | 74.00 | 74.45 | 74.85 | 75.20 | 75.50 | 75.75 | 76.00 | 76.25 | 76.50 | 76.75 |
| 7 | 66.84 | 67.09 | 67.85 | 68.72 | 69.68 | 70.58 | 71.45 | 72.25 | 73.00 | 73.70 | 74.35 | 74.95 | 75.50 | 76.00 | 76.45 | 76.85 | 77.20 | 77.50 | 77.75 | 78.00 | 78.25 | 78.50 | 78.75 |
| 8 | 68.84 | 69.09 | 69.85 | 70.72 | 71.68 | 72.58 | 73.45 | 74.25 | 75.00 | 75.70 | 76.35 | 76.95 | 77.50 | 78.00 | 78.45 | 78.85 | 79.20 | 79.50 | 79.75 | 80.00 | 80.25 | 80.50 | 80.75 |
| 9 | 70.84 | 71.09 | 71.85 | 72.72 | 73.68 | 74.58 | 75.45 | 76.25 | 77.00 | 77.70 | 78.35 | 78.95 | 79.50 | 80.00 | 80.45 | 80.85 | 81.20 | 81.50 | 81.75 | 82.00 | 82.25 | 82.50 | 82.75 |
| 10 | 72.84 | 73.09 | 73.85 | 74.72 | 75.68 | 76.58 | 77.45 | 78.25 | 79.00 | 79.70 | 80.35 | 80.95 | 81.50 | 82.00 | 82.45 | 82.85 | 83.20 | 83.50 | 83.75 | 84.00 | 84.25 | 84.50 | 84.75 |
| 11 | 74.84 | 75.09 | 75.85 | 76.72 | 77.68 | 78.58 | 79.45 | 80.25 | 81.00 | 81.70 | 82.35 | 82.95 | 83.50 | 84.00 | 84.45 | 84.85 | 85.20 | 85.50 | 85.75 | 86.00 | 86.25 | 86.50 | 86.75 |

100%L, 12UH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

| Group | Age | Sex | Weight (kg) | Height (cm) | Body condition score | Heart rate (b/min) | Respiratory rate (r/min) | Rectal temperature (°C) | Capillary refill time (s) | Mucous membranes | Other observations |
|-------|-----|--------|-------------|-------------|----------------------|--------------------|--------------------------|-------------------------|---------------------------|------------------|--------------------|
| 139 | 1 | Male | 139 | 139 | 1 | 139 | 139 | 139 | 139 | 139 | 139 |
| 140 | 1 | Female | 140 | 140 | 1 | 140 | 140 | 140 | 140 | 140 | 140 |
| 141 | 1 | Male | 141 | 141 | 1 | 141 | 141 | 141 | 141 | 141 | 141 |
| 142 | 1 | Female | 142 | 142 | 1 | 142 | 142 | 142 | 142 | 142 | 142 |
| 143 | 1 | Male | 143 | 143 | 1 | 143 | 143 | 143 | 143 | 143 | 143 |
| 144 | 1 | Female | 144 | 144 | 1 | 144 | 144 | 144 | 144 | 144 | 144 |
| 145 | 1 | Male | 145 | 145 | 1 | 145 | 145 | 145 | 145 | 145 | 145 |
| 146 | 1 | Female | 146 | 146 | 1 | 146 | 146 | 146 | 146 | 146 | 146 |
| 147 | 1 | Male | 147 | 147 | 1 | 147 | 147 | 147 | 147 | 147 | 147 |
| 148 | 1 | Female | 148 | 148 | 1 | 148 | 148 | 148 | 148 | 148 | 148 |
| 149 | 1 | Male | 149 | 149 | 1 | 149 | 149 | 149 | 149 | 149 | 149 |
| 150 | 1 | Female | 150 | 150 | 1 | 150 | 150 | 150 | 150 | 150 | 150 |
| 151 | 1 | Male | 151 | 151 | 1 | 151 | 151 | 151 | 151 | 151 | 151 |
| 152 | 1 | Female | 152 | 152 | 1 | 152 | 152 | 152 | 152 | 152 | 152 |
| 153 | 1 | Male | 153 | 153 | 1 | 153 | 153 | 153 | 153 | 153 | 153 |
| 154 | 1 | Female | 154 | 154 | 1 | 154 | 154 | 154 | 154 | 154 | 154 |
| 155 | 1 | Male | 155 | 155 | 1 | 155 | 155 | 155 | 155 | 155 | 155 |
| 156 | 1 | Female | 156 | 156 | 1 | 156 | 156 | 156 | 156 | 156 | 156 |
| 157 | 1 | Male | 157 | 157 | 1 | 157 | 157 | 157 | 157 | 157 | 157 |
| 158 | 1 | Female | 158 | 158 | 1 | 158 | 158 | 158 | 158 | 158 | 158 |
| 159 | 1 | Male | 159 | 159 | 1 | 159 | 159 | 159 | 159 | 159 | 159 |
| 160 | 1 | Female | 160 | 160 | 1 | 160 | 160 | 160 | 160 | 160 | 160 |
| 161 | 1 | Male | 161 | 161 | 1 | 161 | 161 | 161 | 161 | 161 | 161 |
| 162 | 1 | Female | 162 | 162 | 1 | 162 | 162 | 162 | 162 | 162 | 162 |
| 163 | 1 | Male | 163 | 163 | 1 | 163 | 163 | 163 | 163 | 163 | 163 |
| 164 | 1 | Female | 164 | 164 | 1 | 164 | 164 | 164 | 164 | 164 | 164 |
| 165 | 1 | Male | 165 | 165 | 1 | 165 | 165 | 165 | 165 | 165 | 165 |
| 166 | 1 | Female | 166 | 166 | 1 | 166 | 166 | 166 | 166 | 166 | 166 |
| 167 | 1 | Male | 167 | 167 | 1 | 167 | 167 | 167 | 167 | 167 | 167 |
| 168 | 1 | Female | 168 | 168 | 1 | 168 | 168 | 168 | 168 | 168 | 168 |
| 169 | 1 | Male | 169 | 169 | 1 | 169 | 169 | 169 | 169 | 169 | 169 |
| 170 | 1 | Female | 170 | 170 | 1 | 170 | 170 | 170 | 170 | 170 | 170 |
| 171 | 1 | Male | 171 | 171 | 1 | 171 | 171 | 171 | 171 | 171 | 171 |
| 172 | 1 | Female | 172 | 172 | 1 | 172 | 172 | 172 | 172 | 172 | 172 |
| 173 | 1 | Male | 173 | 173 | 1 | 173 | 173 | 173 | 173 | 173 | 173 |
| 174 | 1 | Female | 174 | 174 | 1 | 174 | 174 | 174 | 174 | 174 | 174 |
| 175 | 1 | Male | 175 | | | | | | | | |

249

[illegible]

250

Data ambi 14.70 psia
Data ambi 537.0 R
Data ambi 70.00%
Data scale 1

[illegible]

[illegible]

254

255

[illegible]

[illegible]

run 142
 test_prog Allison8
 test_run 3
 test_test LRPC APL
 test_date 19950818
 test_sen Kelly Boyd
 test_accu Kelly Boyd
 test_engr Ray Castner
 testid NATR full wedge
 testid JER w external supplement
 testid ADV
 testid BASE
 testid 41.228
 testid 35.02
 testid 78.39
 testid 1010.76
 testid 0.20282
 testid 14.2025
 testid 408.798
 testid 63.47
 testid 0
 testid 1.738
 testid 1.819
 testid 24.6373
 testid 25.3652
 testid 3.5112
 testid 18.664
 testid 1403.26
 testid 504.045
 testid 25.8495
 testid 646.427
 testid 0.810857
 testid 22418.7
 testid [28]
 testid 133
 testid 19 Nov 95
 testid 17:11:11
 testid 07:00:10
 testid 17:11:11
 testid 18 Nov 95
 testid 17:11:11
 testid 18 Nov 95
 testid 17:11:11
 testid 150 foot arc; 77F, 70%; Full scale; Throat-oxide SPL

Processing date: Mon Aug 18 15:44:42 1997

Delta amb 14.30 psia

Delta amb 536.0 R

Delta amb 70.00%

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Data ambi 14.70 psia
Data ambi 537.0 R
Data ambi 70.00%
Data scale 1

| data class | 1831 | 1836 | 1841 | 1846 | 1851 | 1856 | 1861 | 1866 | 1871 | 1876 | 1881 | 1886 | 1891 | 1896 | 1901 | 1906 | 1911 | 1916 | 1921 | 1926 | 1931 | 1936 | 1941 | 1946 | 1951 | 1956 | 1961 | 1966 | 1971 | 1976 | 1981 | 1986 | 1991 | 1996 | 2001 | 2006 | 2011 | 2016 | 2021 | 2026 | 2031 | 2036 | 2041 | 2046 | 2051 | 2056 | 2061 | 2066 | 2071 | 2076 | 2081 | 2086 | 2091 | 2096 | 2101 | 2106 | 2111 | 2116 | 2121 | 2126 | 2131 | 2136 | 2141 | 2146 | 2151 | 2156 | 2161 | 2166 | 2171 | 2176 | 2181 | 2186 | 2191 | 2196 | 2201 | 2206 | 2211 | 2216 | 2221 | 2226 | 2231 | 2236 | 2241 | 2246 | 2251 | 2256 | 2261 | 2266 | 2271 | 2276 | 2281 | 2286 | 2291 | 2296 | 2301 | 2306 | 2311 | 2316 | 2321 | 2326 | 2331 | 2336 | 2341 | 2346 | 2351 | 2356 | 2361 | 2366 | 2371 | 2376 | 2381 | 2386 | 2391 | 2396 | 2401 | 2406 | 2411 | 2416 | 2421 | 2426 | 2431 | 2436 | 2441 | 2446 | 2451 | 2456 | 2461 | 2466 | 2471 | 2476 | 2481 | 2486 | 2491 | 2496 | 2501 | 2506 | 2511 | 2516 | 2521 | 2526 | 2531 | 2536 | 2541 | 2546 | 2551 | 2556 | 2561 | 2566 | 2571 | 2576 | 2581 | 2586 | 2591 | 2596 | 2601 | 2606 | 2611 | 2616 | 2621 | 2626 | 2631 | 2636 | 2641 | 2646 | 2651 | 2656 | 2661 | 2666 | 2671 | 2676 | 2681 | 2686 | 2691 | 2696 | 2701 | 2706 | 2711 | 2716 | 2721 | 2726 | 2731 | 2736 | 2741 | 2746 | 2751 | 2756 | 2761 | 2766 | 2771 | 2776 | 2781 | 2786 | 2791 | 2796 | 2801 | 2806 | 2811 | 2816 | 2821 | 2826 | 2831 | 2836 | 2841 | 2846 | 2851 | 2856 | 2861 | 2866 | 2871 | 2876 | 2881 | 2886 | 2891 | 2896 | 2901 | 2906 | 2911 | 2916 | 2921 | 2926 | 2931 | 2936 | 2941 | 2946 | 2951 | 2956 | 2961 | 2966 | 2971 | 2976 | 2981 | 2986 | 2991 | 2996 | 3001 | 3006 | 3011 | 3016 | 3021 | 3026 | 3031 | 3036 | 3041 | 3046 | 3051 | 3056 | 3061 | 3066 | 3071 | 3076 | 3081 | 3086 | 3091 | 3096 | 3101 | 3106 | 3111 | 3116 | 3121 | 3126 | 3131 | 3136 | 3141 | 3146 | 3151 | 3156 | 3161 | 3166 | 3171 | 3176 | 3181 | 3186 | 3191 | 3196 | 3201 | 3206 | 3211 | 3216 | 3221 | 3226 | 3231 | 3236 | 3241 | 3246 | 3251 | 3256 | 3261 | 3266 | 3271 | 3276 | 3281 | 3286 | 3291 | 3296 | 3301 | 3306 | 3311 | 3316 | 3321 | 3326 | 3331 | 3336 | 3341 | 3346 | 3351 | 3356 | 3361 | 3366 | 3371 | 3376 | 3381 | 3386 | 3391 | 3396 | 3401 | 3406 | 3411 | 3416 | 3421 | 3426 | 3431 | 3436 | 3441 | 3446 | 3451 | 3456 | 3461 | 3466 | 3471 | 3476 | 3481 | 3486 | 3491 | 3496 | 3501 | 3506 | 3511 | 3516 | 3521 | 3526 | 3531 | 3536 | 3541 | 3546 | 3551 | 3556 | 3561 | 3566 | 3571 | 3576 | 3581 | 3586 | 3591 | 3596 | 3601 | 3606 | 3611 | 3616 | 3621 | 3626 | 3631 | 3636 | 3641 | 3646 | 3651 | 3656 | 3661 | 3666 | 3671 | 3676 | 3681 | 3686 | 3691 | 3696 | 3701 | 3706 | 3711 | 3716 | 3721 | 3726 | 3731 | 3736 | 3741 | 3746 | 3751 | 3756 | 3761 | 3766 | 3771 | 3776 | 3781 | 3786 | 3791 | 3796 | 3801 | 3806 | 3811 | 3816 | 3821 | 3826 | 3831 | 3836 | 3841 | 3846 | 3851 | 3856 | 3861 | 3866 | 3871 | 3876 | 3881 | 3886 | 3891 | 3896 | 3901 | 3906 | 3911 | 3916 | 3921 | 3926 | 3931 | 3936 | 3941 | 3946 | 3951 | 3956 | 3961 | 3966 | 3971 | 3976 | 3981 | 3986 | 3991 | 3996 | 4001 | 4006 | 4011 | 4016 | 4021 | 4026 | 4031 | 4036 | 4041 | 4046 | 4051 | 4056 | 4061 | 4066 | 4071 | 4076 | 4081 | 4086 | 4091 |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

| | |
|------------|-----------------------------|
| kg | 146 |
| jun | 1 |
| list_prog | Alison96 |
| list_num | 3 |
| list_facil | LeRC APL |
| list_cust | Alison |
| seed_aero | Kathy Boyd |
| seed_aeco | Kathy Boyd |
| seed_angr | Ray Castner |
| warbird | NATH full wedge |
| wtdkg | JEF R w external supplement |

bchtime 17:58:28
...Scenario: 150 foot arc, 77F, 70%; Full scale; Third-octave SPL
Processing date: Fri Aug 22 13:57:37 1987

Data ambis 14.30 points
Data ambis 536.0 R
Data ambis 70.00%
Data scale 1

[illegible]

[illegible]

263

[illegible]

| | |
|-----------|----------------------------|
| rdg | 148 |
| run | 1 |
| test_prog | Atomics |
| test_num | 3 |
| test_faci | LeRC APL |
| test_cust | Allison |
| lead_sero | Kathy Boyd |
| lead_acou | Kathy Boyd |
| lead_engr | Ray Cashner |
| natrib | NATR full wedge |
| nobid | JER w/ external supplement |

biochem 18:21:19
.....Scenario Fly-over, full-scale, 1500' sideline, standard day
Processing date Wed Aug 20 00:14:15 1997

| | |
|-------------|-------------|
| Data embols | 14.70 peiss |
| Data embols | 537.0 R |
| Data embols | 70.00% |
| Data scale | 1 |

| Distance (km) | 1831.16 | 1732.05 | 1655.07 | 1598.27 | 1552.81 | 1523.14 | 1505.73 | 1500 | 1505.73 | 1523.14 | 1552.81 | 1598.27 | 1655.07 | 1732.05 | 1831.16 | 1958.11 | 2171.32 | 2333.98 | 2815.17 | 3000 | 3549.3 | 4206.71 | 5796.55 |
|----------------|---------|---------|---------|---------|---------|---------|---------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------|--------|---------|---------|
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| year | 1831 | 1732 | 1655 | 1598 | 1552 | 1523 | 1505 | 1500 | 1505 | 1523 | 1552 | 1598 | 1655 | 1732 | 1831 | 1958 | 2171 | 2333 | 2815 | 3000 | 3549 | 4206 | 5796 |
| frequency | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | | | | | | | | | | | | | | | | |

NASA Lewis Allison AST Jet Noise Test 1996

[illegible]

100%L, 12TH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

| Category | Sub-category | Value |
|----------|--------------|-------|
| 1 | 1 | 346 |
| 2 | 2 | 1 |
| 3 | 3 | 1 |
| 4 | 4 | 1 |
| 5 | 5 | 1 |
| 6 | 6 | 1 |
| 7 | 7 | 1 |
| 8 | 8 | 1 |
| 9 | 9 | 1 |
| 10 | 10 | 1 |
| 11 | 11 | 1 |
| 12 | 12 | 1 |
| 13 | 13 | 1 |
| 14 | 14 | 1 |
| 15 | 15 | 1 |
| 16 | 16 | 1 |
| 17 | 17 | 1 |
| 18 | 18 | 1 |
| 19 | 19 | 1 |
| 20 | 20 | 1 |
| 21 | 21 | 1 |
| 22 | 22 | 1 |
| 23 | 23 | 1 |
| 24 | 24 | 1 |
| 25 | 25 | 1 |
| 26 | 26 | 1 |
| 27 | 27 | 1 |
| 28 | 28 | 1 |
| 29 | 29 | 1 |
| 30 | 30 | 1 |
| 31 | 31 | 1 |
| 32 | 32 | 1 |
| 33 | 33 | 1 |
| 34 | 34 | 1 |
| 35 | 35 | 1 |
| 36 | 36 | 1 |
| 37 | 37 | 1 |
| 38 | 38 | 1 |
| 39 | 39 | 1 |
| 40 | 40 | 1 |
| 41 | 41 | 1 |
| 42 | 42 | 1 |
| 43 | 43 | 1 |
| 44 | 44 | 1 |
| 45 | 45 | 1 |
| 46 | 46 | 1 |
| 47 | 47 | 1 |
| 48 | 48 | 1 |
| 49 | 49 | 1 |
| 50 | 50 | 1 |
| 51 | 51 | 1 |
| 52 | 52 | 1 |
| 53 | 53 | 1 |
| 54 | 54 | 1 |
| 55 | 55 | 1 |
| 56 | 56 | 1 |
| 57 | 57 | 1 |
| 58 | 58 | 1 |
| 59 | 59 | 1 |
| 60 | 60 | 1 |
| 61 | 61 | 1 |
| 62 | 62 | 1 |
| 63 | 63 | 1 |
| 64 | 64 | 1 |
| 65 | 65 | 1 |
| 66 | 66 | 1 |
| 67 | 67 | 1 |
| 68 | 68 | 1 |
| 69 | 69 | 1 |
| 70 | 70 | 1 |
| 71 | 71 | 1 |
| 72 | 72 | 1 |
| 73 | 73 | 1 |
| 74 | 74 | 1 |
| 75 | 75 | 1 |
| 76 | 76 | 1 |
| 77 | 77 | 1 |
| 78 | 78 | 1 |
| 79 | 79 | 1 |
| 80 | 80 | 1 |
| 81 | 81 | 1 |
| 82 | 82 | 1 |
| 83 | 83 | 1 |
| 84 | 84 | 1 |
| 85 | 85 | 1 |
| 86 | 86 | 1 |
| 87 | 87 | 1 |
| 88 | 88 | 1 |
| 89 | 89 | 1 |
| 90 | 90 | 1 |
| 91 | 91 | 1 |
| 92 | 92 | 1 |
| 93 | 93 | 1 |
| 94 | 94 | 1 |
| 95 | 95 | 1 |
| 96 | 96 | 1 |
| 97 | 97 | 1 |
| 98 | 98 | 1 |
| 99 | 99 | 1 |
| 100 | 100 | 1 |

Data ambi 14.70 psia
Data ambi 537.0 R
Data ambi 70.00%
Data scale 1

| distance (km) | 1831.16 | 1729.05 | 1655.07 | 1598.27 | 1552.81 | 1523.14 | 1505.73 | 1500 | 1505.73 | 1523.14 | 1552.81 | 1598.27 | 1655.07 | 1732.05 | 1831.16 | 1958.11 | 2121.32 | 2233.59 | 2515.17 | 3000 | 3549.3 | 4385.71 | 5795.55 |
|---------------|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|---------|---------|
| year angle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 | 155 | 160 | |
| frequency | 55 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 1000 | 36.36 | 40.87 | 42.22 | 43.64 | 44.54 | 45.33 | 46.41 | 47.18 | 47.81 | 48.32 | 48.72 | 49.10 | 49.47 | 49.84 | 50.14 | 50.35 | 50.48 | 50.54 | 50.58 | 49.97 | 49.36 | 48.45 | 0 |
| 1100 | 40.11 | 44.38 | 45.11 | 46.26 | 46.88 | 47.48 | 48.19 | 48.71 | 49.18 | 49.62 | 50.03 | 50.41 | 50.77 | 51.12 | 51.45 | 51.75 | 51.92 | 52.05 | 52.11 | 49.84 | 48.46 | 47.52 | 0 |
| 1200 | 43.15 | 47.68 | 48.48 | 49.57 | 49.99 | 50.57 | 51.19 | 51.76 | 52.28 | 52.76 | 53.21 | 53.64 | 54.05 | 54.43 | 54.78 | 55.09 | 55.34 | 55.54 | 55.69 | 50.81 | 49.45 | 48.10 | 0 |
| 1300 | 46.38 | 51.04 | 51.92 | 53.00 | 53.32 | 54.33 | 54.93 | 55.52 | 56.08 | 56.61 | 57.11 | 57.59 | 58.05 | 58.48 | 58.87 | 59.23 | 59.54 | 59.80 | 59.99 | 51.48 | 50.23 | 48.81 | 0 |
| 1400 | 49.78 | 54.56 | 55.52 | 56.68 | 56.98 | 58.00 | 58.68 | 59.24 | 59.78 | 60.29 | 60.78 | 61.25 | 61.69 | 62.10 | 62.48 | 62.83 | 63.14 | 63.40 | 63.59 | 54.99 | 53.81 | 52.30 | 0 |
| 1500 | 53.34 | 58.24 | 59.28 | 60.51 | 60.80 | 61.83 | 62.50 | 63.05 | 63.58 | 64.08 | 64.56 | 65.02 | 65.45 | 65.85 | 66.22 | 66.56 | 66.86 | 67.12 | 67.34 | 58.69 | 57.56 | 55.90 | 0 |
| 1600 | 57.00 | 62.02 | 63.14 | 64.44 | 64.72 | 65.75 | 66.42 | 66.96 | 67.48 | 67.96 | 68.43 | 68.87 | 69.29 | 69.68 | 70.04 | 70.37 | 70.67 | 70.93 | 71.15 | 62.18 | 61.09 | 59.31 | 0 |
| 1700 | 60.78 | 65.83 | 67.03 | 68.40 | 68.67 | 69.70 | 70.37 | 70.90 | 71.41 | 71.88 | 72.34 | 72.78 | 73.19 | 73.58 | 73.94 | 74.28 | 74.58 | 74.84 | 75.06 | 65.94 | 64.88 | 63.02 | 0 |
| 1800 | 64.68 | 69.77 | 71.04 | 72.48 | 72.74 | 73.77 | 74.44 | 74.96 | 75.46 | 75.93 | 76.38 | 76.81 | 77.22 | 77.60 | 77.95 | 78.28 | 78.58 | 78.84 | 79.06 | 69.81 | 68.78 | 66.84 | 0 |
| 1900 | 68.69 | 73.81 | 75.15 | 76.65 | 76.90 | 77.93 | 78.60 | 79.12 | 79.61 | 80.08 | 80.53 | 80.96 | 81.37 | 81.75 | 82.10 | 82.42 | 82.71 | 82.96 | 83.17 | 73.66 | 72.65 | 70.62 | 0 |
| 2000 | 72.82 | 77.97 | 79.37 | 80.93 | 81.17 | 82.20 | 82.87 | 83.38 | 83.86 | 84.32 | 84.76 | 85.18 | 85.58 | 85.95 | 86.30 | 86.59 | 86.85 | 87.08 | 87.28 | 77.66 | 76.67 | 74.54 | 0 |
| 2100 | 77.07 | 82.25 | 83.70 | 85.32 | 85.55 | 86.58 | 87.25 | 87.75 | 88.22 | 88.66 | 89.09 | 89.50 | 89.89 | 90.26 | 90.61 | 90.86 | 91.09 | 91.29 | 91.46 | 81.83 | 80.86 | 78.64 | 0 |
| 2200 | 81.44 | 86.65 | 88.15 | 89.83 | 90.06 | 91.09 | 91.76 | 92.25 | 92.71 | 93.15 | 93.57 | 93.97 | 94.35 | 94.71 | 95.05 | 95.37 | 95.66 | 95.92 | 96.15 | 86.24 | 85.28 | 83.00 | 0 |
| 2300 | 85.92 | 91.17 | 92.71 | 94.45 | 94.67 | 95.70 | 96.37 | 96.86 | 97.31 | 97.74 | 98.15 | 98.54 | 98.91 | 99.26 | 99.59 | 99.89 | 100.16 | 100.40 | 100.61 | 90.73 | 89.78 | 87.43 | 0 |
| 2400 | 90.50 | 95.77 | 97.35 | 99.14 | 99.35 | 100.38 | 101.05 | 101.67 | 102.25 | 102.80 | 103.32 | 103.82 | 104.29 | 104.73 | 105.14 | 105.52 | 105.88 | 106.22 | 106.53 | 106.82 | 107.09 | 107.34 | 0 |
| 2500 | 95.00 | 100.27 | 101.89 | 103.72 | 103.93 | 104.96 | 105.63 | 106.12 | 106.59 | 107.04 | 107.47 | 107.88 | 108.27 | 108.64 | 108.98 | 109.30 | 109.60 | 109.88 | 110.14 | 110.39 | 110.62 | 110.83 | 0 |
| 2600 | 99.60 | 104.87 | 106.52 | 108.39 | 108.60 | 109.63 | 110.30 | 110.79 | 111.26 | 111.70 | 112.12 | 112.52 | 112.89 | 113.24 | 113.57 | 113.88 | 114.17 | 114.44 | 114.69 | 114.92 | 115.13 | 115.32 | 0 |
| 2700 | 104.30 | 109.57 | 111.24 | 113.14 | 113.35 | 114.38 | 115.05 | 115.54 | 116.01 | 116.45 | 116.87 | 117.27 | 117.64 | 117.98 | 118.30 | 118.60 | 118.88 | 119.14 | 119.38 | 119.61 | 119.81 | 119.99 | 0 |
| 2800 | 109.10 | 114.37 | 116.06 | 117.99 | 118.20 | 119.23 | 119.90 | 120.39 | 120.86 | 121.29 | 121.71 | 122.11 | 122.48 | 122.82 | 123.14 | 123.44 | 123.72 | 123.98 | 124.23 | 124.46 | 124.66 | 124.83 | 0 |
| 2900 | 114.00 | 119.27 | 120.98 | 122.94 | 123.15 | 124.18 | 124.85 | 125.34 | 125.81 | 126.24 | 126.66 | 127.05 | 127.42 | 127.76 | 128.08 | 128.38 | 128.66 | 128.92 | 129.17 | 129.39 | 129.58 | 129.74 | 0 |
| 3000 | 119.00 | 124.27 | 126.00 | 128.00 | 128.21 | 129.24 | 129.91 | 130.40 | 130.87 | 131.30 | 131.71 | 132.11 | 132.48 | 132.82 | 133.14 | 133.44 | 133.72 | 133.98 | 134.23 | 134.46 | 134.66 | 134.82 | 0 |
| 3100 | 124.10 | 129.37 | 131.12 | 133.14 | 133.35 | 134.38 | 135.05 | 135.54 | 136.01 | 136.44 | 136.85 | 137.24 | 137.61 | 137.95 | 138.27 | 138.57 | 138.85 | 139.11 | 139.36 | 139.58 | 139.77 | 139.93 | 0 |
| 3200 | 129.30 | 134.57 | 136.34 | 138.38 | 138.59 | 139.62 | 140.29 | 140.78 | 141.25 | 141.68 | 142.09 | 142.48 | 142.85 | 143.19 | 143.51 | 143.81 | 144.08 | 144.33 | 144.57 | 144.79 | 144.98 | 145.14 | 0 |
| 3300 | 134.60 | 139.87 | 141.66 | 143.72 | 143.93 | 144.96 | 145.63 | 146.12 | 146.59 | 147.02 | 147.43 | 147.82 | 148.19 | 148.53 | 148.85 | 149.15 | 149.43 | 149.69 | 149.93 | 150.14 | 150.32 | 150.48 | 0 |
| 3400 | 139.90 | 145.17 | 146.98 | 149.06 | 149.27 | 150.30 | 150.97 | 151.46 | 151.93 | 152.36 | 152.77 | 153.16 | 153.53 | 153.87 | 154.19 | 154.49 | 154.76 | 155.01 | 155.25 | 155.46 | 155.64 | 155.79 | 0 |
| 3500 | 145.30 | 150.57 | 152.39 | 154.48 | 154.69 | 155.72 | 156.39 | 156.88 | 157.35 | 157.78 | 158.19 | 158.58 | 158.95 | 159.29 | 159.61 | 159.91 | 160.18 | 160.43 | 160.67 | 160.88 | 161.06 | 161.21 | 0 |
| 3600 | 150.80 | 156.07 | 157.90 | 160.00 | 160.21 | 161.24 | 161.91 | 162.40 | 162.87 | 163.30 | 163.71 | 164.10 | 164.47 | 164.81 | 165.13 | 165.43 | 165.70 | 165.95 | 166.19 | 166.40 | 166.58 | 166.73 | 0 |
| 3700 | 156.30 | 161.57 | 163.41 | 165.52 | 165.73 | 166.76 | 167.43 | 167.92 | 168.39 | 168.82 | 169.23 | 169.62 | 170.00 | 170.35 | 170.67 | 170.97 | 171.24 | 171.49 | 171.73 | 171.94 | 172.11 | 172.26 | 0 |
| 3800 | 161.90 | 167.17 | 169.02 | 171.14 | 171.35 | 172.38 | 173.05 | 173.54 | 174.01 | 174.44 | 174.85 | 175.24 | 175.61 | 175.95 | 176.27 | 176.57 | 176.84 | 177.09 | 177.33 | 177.54 | 177.71 | 177.86 | 0 |
| 3900 | 167.50 | 172.77 | 174.63 | 176.76 | 176.97 | 178.00 | 178.67 | 179.16 | 179.63 | 180.06 | 180.47 | 180.86 | 181.24 | 181.59 | 181.91 | 182.21 | 182.48 | 182.73 | 182.97 | 183.18 | 183.36 | 183.51 | 0 |
| 4000 | 173.10 | 178.37 | 180.24 | 182.38 | 182.59 | 183.62 | 184.29 | 184.78 | 185.25 | 185.68 | 186.09 | 186.48 | 186.85 | 187.19 | 187.51 | 187.81 | 188.08 | 188.33 | 188.57 | 188.78 | 188.95 | 189.10 | 0 |
| 4100 | 178.80 | 184.07 | 185.94 | 188.08 | 188.29 | 189.32 | 189.99 | 190.48 | 190.95 | 191.38 | 191.79 | 192.18 | 192.55 | 192.89 | 193.21 | 193.51 | 193.78 | 194.03 | 194.27 | 194.48 | 194.65 | 194.80 | 0 |
| 4200 | 184.50 | 189.77 | 191.64 | 193.78 | 193.99 | 195.02 | 195.69 | 196.18 | 196.65 | 197.08 | 197.49 | 197.88 | 198.25 | 198.59 | 198.91 | 199.21 | 199.48 | 199.73 | 199.97 | 200.18 | 200.35 | 200.49 | 0 |
| 4300 | 190.20 | 195.47 | 197.34 | 199.48 | 199.69 | 200.72 | 201.39 | 201.88 | 202.35 | 202.78 | 203.19 | 203.58 | 203.95 | 204.29 | 204.61 | 204.91 | 205.18 | 205.43 | 205.67 | 205.88 | 206.05 | 206.19 | 0 |
| 4400 | 196.00 | 201.27 | 203.14 | 205.28 | 205.49 | 206.52 | 207.19 | 207.68 | 208.15 | 208.58 | 208.99 | 209.38 | 209.75 | 210.09 | 210.41 | 210.71 | 210.98 | 211.23 | 211.47 | 211.68 | 211.85 | 211.99 | 0 |
| 4500 | 201.80 | 207.07 | 208.94 | 211.08 | 211.29 | 212.32 | 212.99 | 213.48 | 213.95 | 214.38 | 214.79 | 215.18 | 215.55 | 215.89 | 216.21 | 216.51 | 216.78 | 217.03 | 217.27 | 217.48 | 217.64 | 217.78 | 0 |
| 4600 | 207.60 | 212.87 | 214.74 | 216.88 | 217.09 | 218.12 | 218.79 | 219.28 | 219.75 | 220.18 | 220.59 | 220.98 | 221.35 | 221.69 | 222.01 | 222.31 | 222.58 | 222.83 | 223.07 | 223.28 | 223.45 | 223.59 | 0 |
| 4700 | 213.50 | 218.77 | 220.64 | 222.78 | 222.99 | 224.02 | 224.69 | 225.18 | 225.65 | 226.08 | 226.49 | 226.88 | 227.25 | 227.59 | 227.91 | 228.21 | 228.48 | 228.73 | 228.97 | 229.18 | 229.34 | 229.48 | 0 |
| 4800 | 219.40 | 224.67 | 226.54 | 228.68 | 228.89 | 229.92 | 230.59 | 231.08 | 231.55 | 231.98 | 232.39 | 232.78 | 233.15 | 233.49 | 233.81 | 234.11 | 234.38 | 234.63 | 234.87 | 235.08 | 235.25 | 235.39 | 0 |
| 4900 | 225.40 | 230.67 | 232.54 | 234.68 | 234.89 | 235.92 | 236.59 | 237.08 | 237.55 | 237.98 | 238.39 | 238.78 | 239.15 | 239.49 | 239.81 | 240.11 | 240.38 | 240.63 | 240.87 | 241.08 | 241.24 | 241.38 | 0 |
| 5000 | 231.50 | 236.77 | 238.64 | 240.78 | 240.99 | 242.02 | 242.69 | 243.18 | 243.65 | 244.08 | 244.49 | 244.88 | 245.25 | 245.59 | 245.91 | 246.21 | 246.48 | 246.73 | 246.97 | 247.18 | 247.34 | 247.48 | 0 |
| 5100 | 237.60 | 242.87 | 244.74 | 246.88 | 247.09 | 248.12 | 248.79 | 249.28 | 249.75 | 250.18 | 250.59 | 250.98 | 251.35 | 251.69 | 252.01 | 252.31 | 252.58 | 252.83 | 253.07 | 253.28 | 253.44 | 253.58 | 0 |
| 5200 | 243.80 | 249.07 | 250.94 | 253.08 | 253.29 | 254.32 | 254.99 | 255.48 | 255.95 | 256.38 | 256.79 | 257.18 | 257.55 | 257.89 | 258.21 | 258.51 | 258.78 | 259.03 | 259.27 | 259.48 | 259.64 | 259.78 | 0 |
| 5300 | 249.90 | 255.17 | 257.04 | 259.18 | 259.39 | 260.42 | 261.09 | 261.58 | 262.05 | 262.48 | 262.89 | 263.28 | 263.65 | 263.99 | 264.31 | 264.61 | 264.88 | 265.13 | 265.37 | 265.58 | 265.74 | 265.88 | 0 |
| 5400 | 256.10 | 261.37 | 263.24 | 265.38 | 265.59 | 266.62 | 267.29 | 267.78 | 268.25 | 268.68 | 269.09 | 269.48 | 269.85 | 270.19 | 270.51 | 270.81 | 271.08 | 271.33 | 271.57 | 271.78 | 271.94 | 272.08 | 0 |
| 5500 | 262.40 | 267.67 | 269.54 | 271.68 | 271.89 | 272.92 | 273.59 | 274.08 | 274.55 | 274.98 | 275.39 | 275.78 | 276.15 | 276.49 | 276.81 | 277.11 | 277.38 | 277.63 | 277.87 | 278.08 | 278.24 | 278.38 | 0 |
| 5600 | 268.80 | 274.07 | 275.94 | 278.08 | 278.29 | 279.32 | | | | | | | | | | | | | | | | | |

[illegible]

Date ambia 14.30 psia
Date ambia 536.0 R
Date ambia 70.00%
Date scale 1

[illegible]

273

[illegible]

[illegible]

275

[illegible]

[illegible]

Date sent: 14 Jun 2019

Data available 14.7.0 pages
Data available 537.0 R

| | |
|------------|--------|
| Data ambia | 70.00% |
|------------|--------|

Data scale

1973 18

1831. 10 55

0) express you

frequency
55

| | |
|-----|-------|
| 80 | 30.99 |
| 100 | 32.91 |

| | |
|-----|-------|
| 100 | 34.51 |
| 130 | 37.42 |

180 37.26

200 42.01

| | |
|-----|------|
| 250 | 47.1 |
| 300 | 45.0 |

| | |
|-----|-------|
| 320 | 43.83 |
| 400 | 43.78 |

44.0%

44.7
630

| | |
|-------|-------|
| 800 | 44.27 |
| 1,000 | 44.04 |

| | |
|------|-------|
| 1000 | 44.25 |
| 1300 | 42.84 |

41.77

2000 40.28

2500 30.37

| | |
|------|-------|
| 3200 | 36.04 |
| 4000 | 28.18 |

4000 19.10

00000

0000

000001

63 49

[illegible]

[illegible]

NASA Lewis Allison AST Jet Noise Test 1998

[illegible]

bchtime 15:25:48
 --Scenario: 150 foot arc; 77F, 70%; Full scale; Third-octave SPL
 Processing date: Wed Aug 20 04:02:01 1997

| | |
|-------------|------------|
| Data ambisi | 14.30 pela |
| Data ambisi | 5.98.0 A |
| Data ambisi | 70.00% |
| Data scale | 1 |

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| | | | | 172 | | | | | | | | | | 173 | | | | | | | | | | 174 | | | | | | | | | | 175 | | | | | | | | | | 176 | | | | | | | | | | 177 | | | | | | | | | | 178 | | | | | | | | | | 179 | | | | | | | | | | 180 | | | | | | | | | | 181 | | | | | | | | | | 182 | | | | | | | | | | 183 | | | | | | | | | | 184 | | | | | | | | | | 185 | | | | | | | | | | 186 | | | | | | | | | | 187 | | | | | | | | | | 188 | | | | | | | | | | 189 | | | | | | | | | | 190 | | | | | | | | | | 191 | | | | | | | | | | 192 | | | | | | | | | | 193 | | | | | | | | | | 194 | | | | | | | | | | 195 | | | | | | | | | | 196 | | | | | | | | | | 197 | | | | | | | | | | 198 | | | | | | | | | | 199 | | | | | | | | | | 200 | | | | | | | | | | 201 | | | | | | | | | | 202 | | | | | | | | | | 203 | | | | | | | | | | 204 | | | | | | | | | | 205 | | | | | | | | | | 206 | | | | | | | | | | 207 | | | | | | | | | | 208 | | | | | | | | | | 209 | | | | | | | | | | 210 | | | | | | | | | | 211 | | | | | | | | | | 212 | | | | | | | | | | 213 | | | | | | | | | | 214 | | | | | | | | | | 215 | | | | | | | | | | 216 | | | | | | | | | | 217 | | | | | | | | | | 218 | | | | | | | | | | 219 | | | | | | | | | | 220 | | | | | | | | | | 221 | | | | | | | | | | 222 | | | | | | | | | | 223 | | | | | | | | | | 224 | | | | | | | | | | 225 | | | | | | | | | | 226 | | | | | | | | | | 227 | | | | | | | | | | 228 | | | | | | | | | | 229 | | | | | | | | | | 230 | | | | | | | | | | 231 | | | | | | | | | | 232 | | | | | | | | | | 233 | | | | | | | | | | 234 | | | | | | | | | | 235 | | | | | | | | | | 236 | | | | | | | | | | 237 | | | | | | | | | | 238 | | | | | | | | | | 239 | | | | | | | | | | 240 | | | | | | | | | | 241 | | | | | | | | | | 242 | | | | | | | | | | 243 | | | | | | | | | | 244 | | | | | | | | | | 245 | | | | | | | | | | 246 | | | | | | | | | | 247 | | | | | | | | | | 248 | | | | | | | | | | 249 | | | | | | | | | | 250 | | | | | | | | | | 251 | | | | | | | | | | 252 | | | | | | | | | | 253 | | | | | | | | | | 254 | | | | | | | | | 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| lead_kid3 | 1.265 |
| lead_kid4 | 16.7024 |
| lead_kid5 | 17.4008 |
| lead_kid6 | 1.832 |
| lead_kid7 | 9.205 |
| lead_kid8 | 1102.21 |
| lead_kid9 | 499.983 |
| lead_kid10 | 17.2852 |
| lead_kid11 | 599.095 |
| lead_kid12 | 15.1113 |
| lead_kid13 | 8372.43 |
| lead_kid14 | 67.261 |
| lead_kid15 | 374 |
| lead_kid16 | 03 Dec 99 |
| lead_kid17 | 13.25.48 |
| lead_kid18 | DAGSState 03 Dec 99 |
| lead_kid19 | DAGSTime 15:25.48 |
| lead_kid20 | Birthday 03 Dec 99 |
| lead_kid21 | Birthday 13.25.48 |
| lead_kid22 | --Scenario: Fly-over, full scale, 1500' altitude, standard day |
| lead_kid23 | Processing date: |
| lead_kid24 | Wed Aug 20 04:02:09 1997 |

| Class | Distance | Angle | Frequency | Power | Phase | Amplitude | Velocity | Acceleration | Deceleration | Position | Altitude | Depth | Pressure | Temperature | Humidity | Wind | Current | Magnetic | Electric | Gravitational | Acoustic | Optical | Thermal | Mechanical | Chemical | Biological | Geological | Astronomical | Environmental | Social | Economic | Political | Cultural | Religious | Philosophical | Artistic | Scientific | Technological | Medical | Legal | Ethical | Moral | Political | Economic | Social | Environmental | Health | Education | Science | Technology | Industry | Government | Media | Communication | Transportation | Infrastructure | Energy | Environment | Climate | Weather | Disaster | Security | Defense | Space | Outer Space | Interplanetary | Interstellar | Galactic | Cosmic | Universe | Existence | Meaning | Purpose | Value | Quality | Quantity | Measure | Unit | Scale | Range | Limit | Boundary | Edge | Corner | Vertex | Point | Line | Plane | Volume | Area | Length | Width | Height | Depth | Distance | Time | Duration | Frequency | Wavelength | Period | Phase | Amplitude | Velocity | Acceleration | Deceleration | Position | Altitude | Depth | Pressure | Temperature | Humidity | Wind | Current | Magnetic | Electric | Gravitational | Acoustic | Optical | Thermal | Mechanical | Chemical | Biological | Geological | Astronomical | Environmental | Social | Economic | Political | Cultural | Religious | Philosophical | Artistic | Scientific | Technological | Medical | Legal | Ethical | Moral | Political | Economic | Social | Environmental | Health | Education | Science | Technology | Industry | Government | Media | Communication | Transportation | Infrastructure | Energy | Environment | Climate | Weather | Disaster | Security | Defense | Space | Outer Space | Interplanetary | Interstellar | Galactic | Cosmic | Universe | Existence | Meaning | Purpose | Value | Quality | Quantity | Measure | Unit | Scale | Range | Limit | Boundary | Edge | Corner | Vertex | Point | Line | Plane | Volume | Area | Length | Width | Height | Depth | Distance | Time | Duration | Frequency | Wavelength | Period | Phase | Amplitude | Velocity | Acceleration | Deceleration | Position | Altitude | Depth | Pressure | Temperature | Humidity | Wind | Current | Magnetic | Electric | Gravitational | Acoustic | Optical | Thermal | Mechanical | Chemical | Biological | Geological | Astronomical | Environmental | Social | Economic | Political | Cultural | Religious | Philosophical | Artistic | Scientific | Technological | Medical | Legal | Ethical | Moral | Political | Economic | Social | Environmental | Health | Education | Science | Technology | Industry | Government | Media | Communication | Transportation | Infrastructure | Energy | Environment | Climate | Weather | Disaster | Security | Defense | Space | Outer Space | Interplanetary | Interstellar | Galactic | Cosmic | Universe | Existence | Meaning | Purpose | Value | Quality | Quantity | Measure | Unit | Scale | Range | Limit | Boundary | Edge | Corner | Vertex | Point | Line | Plane | Volume | Area | Length | Width | Height | Depth | Distance | Time | Duration | Frequency | Wavelength | Period | Phase | Amplitude | Velocity | Acceleration | Deceleration | Position | Altitude | Depth | Pressure | Temperature | Humidity | Wind | Current | Magnetic | Electric | Gravitational | Acoustic | Optical | Thermal | Mechanical | Chemical | Biological | Geological | Astronomical | Environmental | Social | Economic | Political | Cultural | Religious | Philosophical | Artistic | Scientific | Technological | Medical | Legal | Ethical | Moral | Political | Economic | Social | Environmental | Health | Education | Science | Technology | Industry | Government | Media | Communication | Transportation | Infrastructure | Energy | Environment | Climate | Weather | Disaster | Security | Defense | Space | Outer Space | Interplanetary | Interstellar | Galactic | Cosmic | Universe | Existence | Meaning | Purpose | Value | Quality | Quantity | Measure | Unit | Scale | Range | Limit | Boundary | Edge | Corner | Vertex | Point | Line | Plane | Volume | Area | Length | Width | Height | Depth | Distance | Time | Duration | Frequency | Wavelength | Period | Phase | Amplitude | Velocity | Acceleration | Deceleration | Position | Altitude | Depth | Pressure | Temperature | Humidity | Wind | Current | Magnetic | Electric | Gravitational | Acoustic | Optical | Thermal | Mechanical | Chemical | Biological | Geological | Astronomical | Environmental | Social | Economic | Political | Cultural | Religious | Philosophical | Artistic | Scientific | Technological | Medical | Legal | Ethical | Moral | Political | Economic | Social | Environmental | Health | Education | Science | Technology | Industry | Government | Media | Communication | Transportation | Infrastructure | Energy | Environment | Climate | Weather | Disaster | Security | Defense | Space | Outer Space | Interplanetary | Interstellar | Galactic | Cosmic | Universe | Existence | Meaning | Purpose | Value | Quality | Quantity | Measure | Unit | Scale | Range | Limit | Boundary | Edge | Corner | Vertex | Point | Line | Plane | Volume | Area | Length | Width | Height | Depth | Distance | Time | Duration | Frequency | Wavelength | Period | Phase | Amplitude | Velocity | Acceleration | Deceleration | Position | Altitude | Depth | Pressure | Temperature | Humidity | Wind | Current | Magnetic | Electric | Gravitational | Acoustic | Optical | Thermal | Mechanical | Chemical | Biological | Geological | Astronomical | Environmental | Social | Economic | Political | Cultural | Religious | Philosophical | Artistic | Scientific | Technological | Medical | Legal | Ethical | Moral | Political | Economic | Social | Environmental | Health | Education | Science | Technology | Industry | Government | Media | Communication | Transportation | Infrastructure | Energy | Environment | Climate | Weather | Disaster | Security | Defense | Space | Outer Space | Interplanetary | Interstellar | Galactic | Cosmic | Universe | Existence | Meaning | Purpose</ |
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| distance, ft | yaw angle | roll angle (°) | frequency |
|--------------|-----------|----------------|-----------|
| 150 | 55 | 0 | 69.69 |
| 55 | 0 | 55 | 67.26 |
| | | 80 | 68.43 |
| | | 100 | 68.96 |
| | | 130 | 68.96 |
| | | 160 | 70.85 |
| | | 200 | 72.84 |
| | | 250 | 75.56 |
| | | 300 | 75.56 |
| | | 400 | 75.4 |
| | | 500 | 76.48 |
| | | 630 | 76.83 |
| | | 800 | 78.69 |
| | | 1000 | 80.1 |
| | | 1300 | 80.66 |
| | | 1600 | 80.87 |
| | | 2000 | 81.71 |
| | | 2500 | 81.22 |
| | | 3200 | 81.2 |
| | | 4000 | 79.74 |
| | | 5000 | 78.55 |
| | | 6300 | 77.13 |
| | | 8000 | 75.89 |
| | | 10000 | 74.02 |
| | | QASPL | 91.27 |

[illegible]

Mon Aug 18 10:11:38 1997

Scenario: Fly-over
Processing date:

Data arribis 14 70 paisa
Data arribis 537 0 R
Data arribis 70 00%
Data arribis !

[illegible]

[illegible]

Data sample 14.30 oia

Data ambient 538.0 A

| Debita ambida | 70.00% |
|---------------|--------|
|---------------|--------|

Data scale

distance: (1) 150

55

0) before you

frequency

| | |
|-----|-------|
| 80 | 71.59 |
| 100 | 71.93 |

100 71.83

130 72.89

160 73.7

200 73.82

| | |
|-----|-------|
| 250 | 70.2 |
| 330 | 70.74 |

| | |
|-----|-------|
| 320 | 79.34 |
| 400 | 78.93 |

500 80.14

830 81.22

| | |
|-------|-------|
| 800 | 82.24 |
| 1,000 | 84.39 |

| | |
|------|-------|
| 1000 | 84.39 |
| 1300 | 85.28 |

| | |
|------|-------|
| 1300 | 63.26 |
| 1800 | 66.11 |

2000 88.34

2500 85.64

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total | Average | Median | Mode | Range | Variance | Standard Deviation | Coefficient of Variation | Kurtosis | Skewness | Correlation Coefficient | Pearson's Chi-Square | F-Test | T-Test | Z-Test | Significance Level | Confidence Interval | Hypothesis Test | Regression Analysis | ANOVA | Factorial Design | Experimental Design | Survey Design | Qualitative Research | Quantitative Research | Mixed Methods | Action Research | Case Study | Ethnography | Phenomenology | Grounded Theory | Naturalistic Inquiry | Discourse Analysis | Content Analysis | Textual Analysis | Visual Analysis | Audio Analysis | Video Analysis | Interview Analysis | Focus Group Analysis | Delphi Method | Expert Panel | Jury Deliberation | Consensus Building | Participatory Action Research | Community-Based Research | Translational Research | Health Services Research | Policy Evaluation | Program Evaluation | Impact Evaluation | Cost-Benefit Analysis | Cost-Effectiveness Analysis | Health Equity Research | Health Disparities Research | Health Communication Research | Health Behavior Research | Health Policy Research | Health Law Research | Health Economics Research | Health Management Research | Health Organization Research | Health Systems Research | Health Care Delivery Research | Health Care Quality Research | Health Care Access Research | Health Care Safety Research | Health Care Efficiency Research | Health Care Effectiveness Research | Health Care Innovation Research | Health Care Transformation Research | Health Care Reform Research | Health Care Regulation Research | Health Care Financing Research | Health Care Insurance Research | Health Care Coverage Research | Health Care Affordability Research | Health Care Sustainability Research | Health Care Resilience Research | Health Care Adaptability Research | Health Care Flexibility Research | Health Care Responsiveness Research | Health Care Accountability Research | Health Care Transparency Research | Health Care Integrity Research | Health Care Trustworthiness Research | Health Care Reliability Research | Health Care Validity Research | Health Care Credibility Research | Health Care Relevance Research | Health Care Timeliness Research | Health Care Appropriateness Research | Health Care Necessity Research | Health Care Proportionality Research | Health Care Fairness Research | Health Care Justice Research | Health Care Equality Research | Health Care Equity Research | Health Care Inclusion Research | Health Care Participation Research | Health Care Empowerment Research | Health Care Self-Determination Research | Health Care Privacy Research | Health Care Confidentiality Research | Health Care Security Research | Health Care Risk Management Research | Health Care Patient Safety Research | Health Care Medication Safety Research | Health Care Diagnostic Accuracy Research | Health Care Treatment Efficacy Research | Health Care Adherence Research | Health Care Satisfaction Research | Health Care Quality of Life Research | Health Care Well-being Research | Health Care Mental Health Research | Health Care Physical Health Research | Health Care Social Health Research | Health Care Emotional Health Research | Health Care Intellectual Health Research | Health Care Spiritual Health Research | Health Care Holistic Health Research | Health Care Integrative Health Research | Health Care Complementary Health Research | Health Care Alternative Health Research | Health Care Traditional Health Research | Health Care Indigenous Health Research | Health Care Cultural Health Research | Health Care Linguistic Health Research | Health Care Ethnic Health Research | Health Care Racial Health Research | Health Care Religious Health Research | Health Care Sexual Health Research | Health Care Gender Health Research | Health Care Age Health Research | Health Care Disability Health Research | Health Care Chronic Health Research | Health Care Acute Health Research | Health Care Infectious Health Research | Health Care Non-infectious Health Research | Health Care Maternal Health Research | Health Care Child Health Research | Health Care Adolescent Health Research | Health Care Young Adult Health Research | Health Care Middle-aged Health Research | Health Care Older Adult Health Research | Health Care Elderly Health Research | Health Care Longevity Health Research | Health Care Aging Health Research | Health Care Geriatrics Health Research | Health Care Palliative Health Research | Health Care End-of-life Health Research | Health Care Bereavement Health Research | Health Care Grief Health Research | Health Care Mourning Health Research | Health Care Coping Health Research | Health Care Resilience Health Research | Health Care Stress Health Research | Health Care Anxiety Health Research | Health Care Depression Health Research | Health Care Schizophrenia Health Research | Health Care Bipolar Disorder Health Research | Health Care Personality Disorder Health Research | Health Care Substance Use Disorder Health Research | Health Care Eating Disorder Health Research | Health Care Sleep Disorder Health Research | Health Care Attention Deficit Hyperactivity Disorder Health Research | Health Care Autism Spectrum Disorder Health Research | Health Care Intellectual Disability Health Research | Health Care Developmental Delay Health Research | Health Care Learning Disabilities Health Research | Health Care Specific Learning Disabilities Health Research | Health Care Reading Disabilities Health Research | Health Care Writing Disabilities Health Research | Health Care Mathematics Disabilities Health Research | Health Care Science Disabilities Health Research | Health Care History Disabilities Health Research | Health Care Language Disabilities Health Research | Health Care Art Disabilities Health Research | Health Care Music Disabilities Health Research | Health Care Dance Disabilities Health Research | Health Care Theater Disabilities Health Research | Health Care Film Disabilities Health Research | Health Care Media Disabilities Health Research | Health Care Technology Disabilities Health Research | Health Care Information Disabilities Health Research | Health Care Communication Disabilities Health Research | Health Care Social Skills Disabilities Health Research | Health Care Emotional Regulation Disabilities Health Research | Health Care Problem Solving Disabilities Health Research | Health Care Decision Making Disabilities Health Research | Health Care Critical Thinking Disabilities Health Research | Health Care Creativity Disabilities Health Research | Health Care Innovation Disabilities Health Research | Health Care Entrepreneurship Disabilities Health Research | Health Care Leadership Disabilities Health Research | Health Care Management Disabilities Health Research | Health Care Business Disabilities Health Research | Health Care Finance Disabilities Health Research | Health Care Marketing Disabilities Health Research | Health Care Sales Disabilities Health Research | Health Care Customer Service Disabilities Health Research | Health Care Human Resources Disabilities Health Research | Health Care Operations Disabilities Health Research | Health Care Logistics Disabilities Health Research | Health Care Supply Chain Disabilities Health Research | Health Care Procurement Disabilities Health Research | Health Care Contract Management Disabilities Health Research | Health Care Legal Compliance Disabilities Health Research | Health Care Regulatory Compliance Disabilities Health Research | Health Care Industry Standards Disabilities Health Research | Health Care Best Practices Disabilities Health Research | Health Care Continuous Improvement Disabilities Health Research | Health Care Lean Manufacturing Disabilities Health Research | Health Care Six Sigma Disabilities Health Research | Health Care Total Quality Management Disabilities Health Research | Health Care ISO 9001 Disabilities Health Research | Health Care ISO 14001 Disabilities Health Research | Health Care ISO 26000 Disabilities Health Research | Health Care ISO 27001 Disabilities Health Research | Health Care ISO 28000 Disabilities Health Research | Health Care ISO 31000 Disabilities Health Research | Health Care ISO 33000 Disabilities Health Research | Health Care ISO 34000 Disabilities Health Research | Health Care ISO 35000 Disabilities Health Research | Health Care ISO 36000 Disabilities Health Research | Health Care ISO 37000 Disabilities Health Research | Health Care ISO 38000 Disabilities Health Research | Health Care ISO 39000 Disabilities Health Research | Health Care ISO 40000 Disabilities Health 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97000 Disabilities Health Research | Health Care ISO 98000 Disabilities Health Research | Health Care ISO 99000 Disabilities Health Research | Health Care ISO 100000 Disabilities Health Research | Health Care ISO 101000 Disabilities Health Research | Health Care ISO 102000 Disabilities Health Research | Health Care ISO 103000 Disabilities Health Research | Health Care ISO 104000 Disabilities Health Research | Health Care ISO 105000 Disabilities Health Research | Health Care ISO 106000 Disabilities Health Research | Health Care ISO 107000 Disabilities Health Research | Health Care ISO 108000 Disabilities Health Research | Health Care ISO 109000 Disabilities Health Research | Health Care ISO 110000 Disabilities Health Research | Health Care ISO 111000 Disabilities Health Research | Health Care ISO 112000 Disabilities Health Research | Health Care ISO 113000 Disabilities Health Research | Health Care ISO 114000 Disabilities Health Research | |
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|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|---------|--------|------|-------|----------|--------------------|--------------------------|----------|----------|-------------------------|----------------------|--------|--------|--------|--------------------|---------------------|-----------------|---------------------|-------|------------------|---------------------|---------------|----------------------|-----------------------|---------------|-----------------|------------|-------------|---------------|-----------------|----------------------|--------------------|------------------|------------------|-----------------|----------------|----------------|--------------------|----------------------|---------------|--------------|-------------------|--------------------|-------------------------------|--------------------------|------------------------|--------------------------|-------------------|--------------------|-------------------|-----------------------|-----------------------------|------------------------|-----------------------------|-------------------------------|--------------------------|------------------------|---------------------|---------------------------|----------------------------|------------------------------|-------------------------|-------------------------------|------------------------------|-----------------------------|-----------------------------|---------------------------------|------------------------------------|---------------------------------|-------------------------------------|-----------------------------|---------------------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------------|-------------------------------------|---------------------------------|-----------------------------------|----------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|--------------------------------|--------------------------------------|----------------------------------|-------------------------------|----------------------------------|--------------------------------|---------------------------------|--------------------------------------|--------------------------------|--------------------------------------|-------------------------------|------------------------------|-------------------------------|-----------------------------|--------------------------------|------------------------------------|----------------------------------|---|------------------------------|--------------------------------------|-------------------------------|--------------------------------------|-------------------------------------|--|--|---|--------------------------------|-----------------------------------|--------------------------------------|---------------------------------|------------------------------------|--------------------------------------|------------------------------------|---------------------------------------|--|---------------------------------------|--------------------------------------|---|---|---|---|--|--------------------------------------|--|------------------------------------|------------------------------------|---------------------------------------|------------------------------------|------------------------------------|---------------------------------|--|-------------------------------------|-----------------------------------|--|--|--------------------------------------|-----------------------------------|--|---|---|---|-------------------------------------|---------------------------------------|-----------------------------------|--|--|---|---|-----------------------------------|--------------------------------------|------------------------------------|--|------------------------------------|-------------------------------------|--|---|--|--|--|---|--|--|--|---|---|---|--|--|--|--|--|--|---|--|--|--|--|---|--|---|--|--|--|---|--|--|--|---|---|---|---|---|---|--|--|--|---|--|---|--|---|--|--|---|--|---|---|---|---|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|

| | |
|-------|-------|
| 40000 | 83.66 |
| 50000 | 82.46 |

6300 81.43

| | |
|------|------|
| 8000 | 79.8 |
| 9000 | 79.8 |

| Index | 1990 | 1995 | 2000 | 2005 | 2006 |
|-------|-------|-------|--------|--------|--------|
| 10000 | 77.58 | 95.48 | 100.00 | 100.00 | 100.00 |
| 10000 | 77.58 | 95.48 | 100.00 | 100.00 | 100.00 |

7/15/2007 10:48 AM

289

Scenario: Fly-over, full-scale, 1500' sideline, standard day
 Mon Aug 18 10:14:20 1997

Data ambia 14.70 posia
Data ambia 537.0 R
Data ambia 70.00%
Data scale !

| Distance (°) | 1831.16 | 1732.05 | 1655.07 | 1598.27 | 1552.91 | 1523.14 | 1505.73 | 1500 | 1505.72 | 1523.14 | 1532.91 | 1596.27 | 1835.07 | 1801.16 | 1954.11 | 2121.32 | 2333.59 | 2615.17 | 3000 | 3549.43 | 4285.71 | 5796.55 |
|--------------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 55 | 80 | 65 | 70 | 75 | 80 | 85 | 90 | 85 | 80 | 105 | 110 | 115 | 120 | 125 | 130 | 140 | 145 | 150 | 155 | 160 | 165 |
| 20 | 48.4 | 50.26 | 53.46 | 56.46 | 59.38 | 62.14 | 64.76 | 67.24 | 69.58 | 71.78 | 73.84 | 75.76 | 77.54 | 79.18 | 80.68 | 82.04 | 83.26 | 84.34 | 85.28 | 86.08 | 86.74 | 87.26 |
| 30 | 48.5 | 51.66 | 55.01 | 58.15 | 61.08 | 63.82 | 66.36 | 68.70 | 70.84 | 72.76 | 74.54 | 76.18 | 77.68 | 79.04 | 80.26 | 81.34 | 82.28 | 83.08 | 83.74 | 84.26 | 84.64 | 84.88 |
| 40 | 51.89 | 55.82 | 59.98 | 64.36 | 68.02 | 70.94 | 73.10 | 74.50 | 75.14 | 75.02 | 74.14 | 72.50 | 70.14 | 67.06 | 63.36 | 59.04 | 55.10 | 51.54 | 48.36 | 45.54 | 43.06 | 40.82 |
| 50 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 60 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 70 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 80 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 90 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 100 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 110 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 120 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 130 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 140 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 150 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14 | 78.74 |
| 160 | 51.89 | 52.64 | 53.68 | 54.92 | 56.34 | 57.92 | 59.58 | 61.28 | 62.98 | 64.64 | 66.24 | 67.78 | 69.26 | 70.66 | 71.98 | 73.22 | 74.38 | 75.46 | 76.46 | 77.38 | 78.14</ | |

[illegible]

100%L, 16UH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

| un | 101 | un | 101 |
|------------|-----------------------|------------|-----------------------|
| test_prog | Allison6 | test_prog | Allison6 |
| test_uni | 3 | test_uni | 3 |
| test_fac1 | LEHC AP1 | test_fac1 | LEHC AP1 |
| test_fac2 | Alison | test_fac2 | Alison |
| test_fac3 | Kathy Boyd | test_fac3 | Kathy Boyd |
| test_fac4 | Kathy Boyd | test_fac4 | Kathy Boyd |
| test_fac5 | Kathy Boyd | test_fac5 | Kathy Boyd |
| test_fac6 | Ray Clester | test_fac6 | Ray Clester |
| test_fac7 | MATH lab wedge | test_fac7 | MATH lab wedge |
| test_fac8 | ACH animal supplement | test_fac8 | ACH animal supplement |
| test_fac9 | JCC | test_fac9 | JCC |
| test_fac10 | BOU | test_fac10 | BOU |
| test_fac11 | 35.02 | test_fac11 | 35.02 |
| test_fac12 | 78.39 | test_fac12 | 78.39 |
| test_fac13 | 4 | test_fac13 | 4 |
| test_fac14 | 562.44 | test_fac14 | 562.44 |
| test_fac15 | 0.0805 | test_fac15 | 0.0805 |
| test_fac16 | 14.2885 | test_fac16 | 14.2885 |
| test_fac17 | 504.373 | test_fac17 | 504.373 |
| test_fac18 | 66.82 | test_fac18 | 66.82 |
| test_fac19 | 0 | test_fac19 | 0 |
| test_fac20 | 1.171 | test_fac20 | 1.171 |
| test_fac21 | 18.1212 | test_fac21 | 18.1212 |
| test_fac22 | 17.1717 | test_fac22 | 17.1717 |
| test_fac23 | 12.13 | test_fac23 | 12.13 |
| test_fac24 | 10.41 | test_fac24 | 10.41 |
| test_fac25 | 1103.35 | test_fac25 | 1103.35 |
| test_fac26 | 486.334 | test_fac26 | 486.334 |
| test_fac27 | 17.2365 | test_fac27 | 17.2365 |
| test_fac28 | 559.683 | test_fac28 | 559.683 |
| test_fac29 | 0.48481 | test_fac29 | 0.48481 |
| test_fac30 | 8537.24 | test_fac30 | 8537.24 |
| test_fac31 | bechman [26] | test_fac31 | bechman [26] |
| test_fac32 | bgnd | test_fac32 | bgnd |
| test_fac33 | 18 Nov 96 | test_fac33 | 18 Nov 96 |
| test_fac34 | 18 Nov 96 | test_fac34 | 18 Nov 96 |
| test_fac35 | 18 Nov 96 | test_fac35 | 18 Nov 96 |
| test_fac36 | 18 Nov 96 | test_fac36 | 18 Nov 96 |
| test_fac37 | 18 Nov 96 | test_fac37 | 18 Nov 96 |
| test_fac38 | 18 Nov 96 | test_fac38 | 18 Nov 96 |
| test_fac39 | 18 Nov 96 | test_fac39 | 18 Nov 96 |
| test_fac40 | 18 Nov 96 | test_fac40 | 18 Nov 96 |
| test_fac41 | 18 Nov 96 | test_fac41 | 18 Nov 96 |
| test_fac42 | 18 Nov 96 | test_fac42 | 18 Nov 96 |
| test_fac43 | 18 Nov 96 | test_fac43 | 18 Nov 96 |
| test_fac44 | 18 Nov 96 | test_fac44 | 18 Nov 96 |
| test_fac45 | 18 Nov 96 | test_fac45 | 18 Nov 96 |
| test_fac46 | 18 Nov 96 | test_fac46 | 18 Nov 96 |
| test_fac47 | 18 Nov 96 | test_fac47 | 18 Nov 96 |
| test_fac48 | 18 Nov 96 | test_fac48 | 18 Nov 96 |
| test_fac49 | 18 Nov 96 | test_fac49 | 18 Nov 96 |
| test_fac50 | 18 Nov 96 | test_fac50 | 18 Nov 96 |
| test_fac51 | 18 Nov 96 | test_fac51 | 18 Nov 96 |
| test_fac52 | 18 Nov 96 | test_fac52 | 18 Nov 96 |
| test_fac53 | 18 Nov 96 | test_fac53 | 18 Nov 96 |
| test_fac54 | 18 Nov 96 | test_fac54 | 18 Nov 96 |
| test_fac55 | 18 Nov 96 | test_fac55 | 18 Nov 96 |
| test_fac56 | 18 Nov 96 | test_fac56 | 18 Nov 96 |
| test_fac57 | 18 Nov 96 | test_fac57 | 18 Nov 96 |
| test_fac58 | 18 Nov 96 | test_fac58 | 18 Nov 96 |
| test_fac59 | 18 Nov 96 | test_fac59 | 18 Nov 96 |
| test_fac60 | 18 Nov 96 | test_fac60 | 18 Nov 96 |
| test_fac61 | 18 Nov 96 | test_fac61 | 18 Nov 96 |
| test_fac62 | 18 Nov 96 | test_fac62 | 18 Nov 96 |
| test_fac63 | 18 Nov 96 | test_fac63 | 18 Nov 96 |
| test_fac64 | 18 Nov 96 | test_fac64 | 18 Nov 96 |
| test_fac65 | 18 Nov 96 | test_fac65 | 18 Nov 96 |
| test_fac66 | 18 Nov 96 | test_fac66 | 18 Nov 96 |
| test_fac67 | 18 Nov 96 | test_fac67 | 18 Nov 96 |
| test_fac68 | 18 Nov 96 | test_fac68 | 18 Nov 96 |
| test_fac69 | 18 Nov 96 | test_fac69 | 18 Nov 96 |
| test_fac70 | 18 Nov 96 | test_fac70 | 18 Nov 96 |
| test_fac71 | 18 Nov 96 | test_fac71 | 18 Nov 96 |
| test_fac72 | 18 Nov 96 | test_fac72 | 18 Nov 96 |
| test_fac73 | 18 Nov 96 | test_fac73 | 18 Nov 96 |
| test_fac74 | 18 Nov 96 | test_fac74 | 18 Nov 96 |
| test_fac75 | 18 Nov 96 | test_fac75 | 18 Nov 96 |
| test_fac76 | 18 Nov 96 | test_fac76 | 18 Nov 96 |
| test_fac77 | 18 Nov 96 | test_fac77 | 18 Nov 96 |
| test_fac78 | 18 Nov 96 | test_fac78 | 18 Nov 96 |
| test_fac79 | 18 Nov 96 | test_fac79 | 18 Nov 96 |
| test_fac80 | 18 Nov 96 | test_fac80 | 18 Nov 96 |
| test_fac81 | 18 Nov 96 | test_fac81 | 18 Nov 96 |
| test_fac82 | 18 Nov 96 | test_fac82 | 18 Nov 96 |
| test_fac83 | 18 Nov 96 | test_fac83 | 18 Nov 96 |
| test_fac84 | 18 Nov 96 | test_fac84 | 18 Nov 96 |
| test_fac85 | 18 Nov 96 | test_fac85 | 18 Nov 96 |
| test_fac86 | 18 Nov 96 | test_fac86 | 18 Nov 96 |
| test_fac87 | 18 Nov 96 | test_fac87 | 18 Nov 96 |
| test_fac88 | 18 Nov 96 | test_fac88 | 18 Nov 96 |
| test_fac89 | 18 Nov 96 | test_fac89 | 18 Nov 96 |

[illegible]

Data ambig 14.70 points
Data ambig 537.0 R
Data ambig 70.00%
Data scale 1

| distance (m) | 1831.18 | 1732.05 | 1598.27 | 1552.91 | 1523.14 | 1506.73 | 1500 | 1500.73 | 1523.14 | 1552.91 | 1598.27 | 1655.07 | 1732.05 | 1831.18 | 1958.11 | 2121.32 | 2333.59 | 2615.17 | 3000 | 3549.73 | 4395.71 | 5795.55 |
|---------------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|
| ray angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| frequency | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 | 170 | 175 | 180 | |
| 100 | 41.79 | 42.32 | 42.86 | 43.40 | 43.94 | 44.48 | 45.02 | 45.56 | 46.10 | 46.64 | 47.18 | 47.72 | 48.26 | 48.80 | 49.34 | 49.88 | 50.42 | 50.96 | 51.50 | 52.04 | 52.58 | |
| 110 | 40.85 | 41.38 | 41.91 | 42.44 | 42.97 | 43.50 | 44.03 | 44.56 | 45.09 | 45.62 | 46.15 | 46.68 | 47.21 | 47.74 | 48.27 | 48.80 | 49.33 | 49.86 | 50.39 | 50.92 | 51.45 | |
| 120 | 40.18 | 40.69 | 41.20 | 41.71 | 42.22 | 42.73 | 43.24 | 43.75 | 44.26 | 44.77 | 45.28 | 45.79 | 46.30 | 46.81 | 47.32 | 47.83 | 48.34 | 48.85 | 49.36 | 49.87 | 50.38 | |
| 130 | 39.64 | 40.13 | 40.62 | 41.11 | 41.60 | 42.09 | 42.58 | 43.07 | 43.56 | 44.05 | 44.54 | 45.03 | 45.52 | 46.01 | 46.50 | 46.99 | 47.48 | 47.97 | 48.46 | 48.95 | 49.44 | |
| 140 | 39.21 | 39.68 | 40.15 | 40.62 | 41.09 | 41.56 | 42.03 | 42.50 | 42.97 | 43.44 | 43.91 | 44.38 | 44.85 | 45.32 | 45.79 | 46.26 | 46.73 | 47.20 | 47.67 | 48.14 | 48.61 | |
| 150 | 38.84 | 39.29 | 39.74 | 40.19 | 40.64 | 41.09 | 41.54 | 41.99 | 42.44 | 42.89 | 43.34 | 43.79 | 44.24 | 44.69 | 45.14 | 45.59 | 46.04 | 46.49 | 46.94 | 47.39 | 47.84 | |
| 160 | 38.53 | 38.96 | 39.39 | 39.82 | 40.25 | 40.68 | 41.11 | 41.54 | 41.97 | 42.40 | 42.83 | 43.26 | 43.69 | 44.12 | 44.55 | 44.98 | 45.41 | 45.84 | 46.27 | 46.70 | 47.13 | |
| 170 | 38.27 | 38.68 | 39.09 | 39.50 | 39.91 | 40.32 | 40.73 | 41.14 | 41.55 | 41.96 | 42.37 | 42.78 | 43.19 | 43.60 | 44.01 | 44.42 | 44.83 | 45.24 | 45.65 | 46.06 | 46.47 | |
| 180 | 38.04 | 38.44 | 38.84 | 39.24 | 39.64 | 40.04 | 40.44 | 40.84 | 41.24 | 41.64 | 42.04 | 42.44 | 42.84 | 43.24 | 43.64 | 44.04 | 44.44 | 44.84 | 45.24 | 45.64 | 46.04 | |
| 190 | 37.84 | 38.23 | 38.62 | 39.01 | 39.40 | 39.79 | 40.18 | 40.57 | 40.96 | 41.35 | 41.74 | 42.13 | 42.52 | 42.91 | 43.30 | 43.69 | 44.08 | 44.47 | 44.86 | 45.25 | 45.64 | |
| 200 | 37.65 | 38.03 | 38.41 | 38.79 | 39.17 | 39.55 | 39.93 | 40.31 | 40.69 | 41.07 | 41.45 | 41.83 | 42.21 | 42.59 | 42.97 | 43.35 | 43.73 | 44.11 | 44.49 | 44.87 | 45.25 | |
| 210 | 37.48 | 37.85 | 38.22 | 38.59 | 38.96 | 39.33 | 39.70 | 40.07 | 40.44 | 40.81 | 41.18 | 41.55 | 41.92 | 42.29 | 42.66 | 43.03 | 43.40 | 43.77 | 44.14 | 44.51 | 44.88 | |
| 220 | 37.32 | 37.68 | 38.04 | 38.40 | 38.76 | 39.12 | 39.48 | 39.84 | 40.20 | 40.56 | 40.92 | 41.28 | 41.64 | 42.00 | 42.36 | 42.72 | 43.08 | 43.44 | 43.80 | 44.16 | 44.52 | |
| 230 | 37.17 | 37.53 | 37.89 | 38.25 | 38.61 | 38.97 | 39.33 | 39.69 | 40.05 | 40.41 | 40.77 | 41.13 | 41.49 | 41.85 | 42.21 | 42.57 | 42.93 | 43.29 | 43.65 | 44.01 | 44.37 | |
| 240 | 37.02 | 37.37 | 37.73 | 38.09 | 38.45 | 38.81 | 39.17 | 39.53 | 39.89 | 40.25 | 40.61 | 40.97 | 41.33 | 41.69 | 42.05 | 42.41 | 42.77 | 43.13 | 43.49 | 43.85 | 44.21 | |
| 250 | 36.87 | 37.22 | 37.58 | 37.94 | 38.30 | 38.66 | 39.02 | 39.38 | 39.74 | 40. | | | | | | | | | | | | |

295

[illegible]

| | run | 102 | 1 |
|---------------|---------------------------|-----|---|
| Alonso6 | | | |
| best_num | 3 | | |
| best_val | LeRC APL | | |
| best_acc | LeRC | | |
| best_scor | Kathy Boyd | | |
| best_tool | Kathy Boyd | | |
| best_lang | Python | | |
| best_rule | Rule | | |
| best_nlp | NATL ml wedge | | |
| best_suppl | NER w external supplement | | |
| best_acou | ACOU | | |
| best_mixed | BASE | | |
| best_nosid | 41.226 | | |
| best_arroz | 35.02 | | |
| best_arroz2 | 78.36 | | |
| best_arroz3 | 78.6 | | |
| best_arroz4 | 78.6 | | |
| best_arroz5 | 0.98041 | | |
| best_pam0 | 14.288 | | |
| best_pam1 | 504.196 | | |
| best_lamb | 85.73 | | |
| best_thru | 85.73 | | |
| best_words1 | 0 | | |
| best_words2 | 1.381 | | |
| best_words3 | 1.381 | | |
| best_words4 | 1.381 | | |
| best_words5 | 1.381 | | |
| best_words6 | 1.381 | | |
| best_words7 | 1.381 | | |
| best_words8 | 1.381 | | |
| best_words9 | 1.381 | | |
| best_words10 | 1.381 | | |
| best_words11 | 1.381 | | |
| best_words12 | 1.381 | | |
| best_words13 | 1.381 | | |
| best_words14 | 1.381 | | |
| best_words15 | 1.381 | | |
| best_words16 | 1.381 | | |
| best_words17 | 1.381 | | |
| best_words18 | 1.381 | | |
| best_words19 | 1.381 | | |
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| best_words22 | 1.381 | | |
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| best_words24 | 1.381 | | |
| best_words25 | 1.381 | | |
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| best_words36 | 1.381 | | |
| best_words37 | 1.381 | | |
| best_words38 | 1.381 | | |
| best_words39 | 1.381 | | |
| best_words40 | 1.381 | | |
| best_words41 | 1.381 | | |
| best_words42 | 1.381 | | |
| best_words43 | 1.381 | | |
| best_words44 | 1.381 | | |
| best_words45 | 1.381 | | |
| best_words46 | 1.381 | | |
| best_words47 | 1.381 | | |
| best_words48 | 1.381 | | |
| best_words49 | 1.381 | | |
| best_words50 | 1.381 | | |
| best_words51 | 1.381 | | |
| best_words52 | 1.381 | | |
| best_words53 | 1.381 | | |
| best_words54 | 1.381 | | |
| best_words55 | 1.381 | | |
| best_words56 | 1.381 | | |
| best_words57 | 1.381 | | |
| best_words58 | 1.381 | | |
| best_words59 | 1.381 | | |
| best_words60 | 1.381 | | |
| best_words61 | 1.381 | | |
| best_words62 | 1.381 | | |
| best_words63 | 1.381 | | |
| best_words64 | 1.381 | | |
| best_words65 | 1.381 | | |
| best_words66 | 1.381 | | |
| best_words67 | 1.381 | | |
| best_words68 | 1.381 | | |
| best_words69 | 1.381 | | |
| best_words70 | 1.381 | | |
| best_words71 | 1.381 | | |
| best_words72 | 1.381 | | |
| best_words73 | 1.381 | | |
| best_words74 | 1.381 | | |
| best_words75 | 1.381 | | |
| best_words76 | 1.381 | | |
| best_words77 | 1.381 | | |
| best_words78 | 1.381 | | |
| best_words79 | 1.381 | | |
| best_words80 | 1.381 | | |
| best_words81 | 1.381 | | |
| best_words82 | 1.381 | | |
| best_words83 | 1.381 | | |
| best_words84 | 1.381 | | |
| best_words85 | 1.381 | | |
| best_words86 | 1.381 | | |
| best_words87 | 1.381 | | |
| best_words88 | 1.381 | | |
| best_words89 | 1.381 | | |
| best_words90 | 1.381 | | |
| best_words91 | 1.381 | | |
| best_words92 | 1.381 | | |
| best_words93 | 1.381 | | |
| best_words94 | 1.381 | | |
| best_words95 | 1.381 | | |
| best_words96 | 1.381 | | |
| best_words97 | 1.381 | | |
| best_words98 | 1.381 | | |
| best_words99 | 1.381 | | |
| best_words100 | 1.381 | | |
| best_words101 | 1.381 | | |
| best_words102 | 1.381 | | |
| best_words103 | 1.381 | | |

Data ambia 14.70 psia
 Data ambia 537.0 R
 Data ambia 70.00%
 Data scale 1

[illegible]

[illegible]

Data ambó 14.30 pais
 Data ambó 536.0 R
 Data ambó 70.00%
 Data scale 1

distance: (l 150

| roll angle (°) | yaw angle (°) |
|----------------|---------------|
| 0 | 55 |

| Frequency | 55 |
|-----------|-------|
| 80 | 75.00 |
| 100 | 70.00 |

| | |
|-----|-------|
| 100 | 78.29 |
| 130 | 78.41 |
| 160 | 79.7 |

| | |
|-----|-------|
| 200 | 80.7 |
| 250 | 81.57 |

| | |
|-----|-------|
| 320 | 91.88 |
| 400 | 90.85 |

| | |
|-----|-------|
| 500 | 81.85 |
| 630 | 81.61 |
| 750 | 81.37 |

| | |
|------|-------|
| 800 | 82.36 |
| 1000 | 82.97 |
| 1200 | 83.57 |

| | |
|------|-------|
| 1300 | 83.37 |
| 1600 | 83.59 |
| 2000 | 82.61 |

| | |
|------|-------|
| 2500 | 81.31 |
| 3200 | 80.18 |

| | |
|------|-------|
| 4000 | 70 |
| 5000 | 77.92 |

| | |
|-------|-------|
| 6300 | 76.74 |
| 8000 | 75.44 |
| 10000 | 73.20 |

| | |
|-------|-------|
| 10000 | 73.30 |
| 0A9PL | 94.14 |

[illegible]

1
OASIS

[illegible]

Scenario: 150 1000 gtc, 77%, 70%, Full access, 11100-000000 37 L
Fri Aug 22 13:28:31 1987
Processing date:

Reference: 4 185

roll angle (ft)

100 1

65 65 2002

400 02.75

64.52
800

1300 85.9

2500 01.10
3200 02.70

| | |
|------|-------|
| 5000 | 01.67 |
| 6300 | 00.27 |

| | |
|--------|-------|
| 100000 | 80.6 |
| OASPL | 77.34 |

302

Data ambis 14.70 pisa
Data ambis 537.0 R
Data ambis 70.00%
Data scale 1

303

OASD

[illegible]

Data arriba 14.70 pesa
 Data arriba 537.0 ft
 Data arriba 70.00%
 Data scale 1

| Distance (km) | 1831.18 | 1720.05 | 1655.07 | 1598.27 | 1552.91 | 1523.14 | 1505.73 | 1500 | 1505.73 | 1523.14 | 1552.91 | 1598.27 | 1655.07 | 1720.05 | 1831.18 |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|------|---------|---------|---------|---------|---------|---------|---------|
| Time (min) | 115 | 110 | 115 | 110 | 110 | 105 | 105 | 100 | 100 | 105 | 110 | 110 | 115 | 120 | 125 |
| Altitude (m) | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 | 170 | 175 | 180 | 185 | 190 |
| Temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Humidity (%) | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Wind speed (m/s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Wind direction (°) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pressure (hPa) | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 |
| Cloud cover (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Visibility (km) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Soil moisture (%) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Ground temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Air temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Water temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Soil temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Leaf temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Canopy temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Stem temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Flower temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Seed temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Root temperature (°C) | 15.0 | 15.5 | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 | 18.5 | 19.0 | 19.5 | 20.0 | 20.5 | 21.0 | 21.5 | 22.0 |
| Soil moisture (mm) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Ground moisture (mm) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Air moisture (mm) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Water moisture (mm) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Soil moisture (g/g) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Air moisture (g/g) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Water moisture (g/g) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Soil moisture (kg/m³) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Air moisture (kg/m³) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Water moisture (kg/m³) | 10 | | | | | | | | | | | | | | |

| | |
|------------|------------------------------|
| prog | 105 |
| un | 1 |
| test_prog | Allison88 |
| test_num | 3 |
| test_facil | LeRC APL |
| test_cust | Allison |
| test_aero | Kathy Boyd |
| test_acou | Kathy Boyd |
| test_engr | Ray Castner |
| testbld | NATR full wedge |
| testbld | JER full external supplement |

bedtime 18:28-57
 **Scenario: Fly-over, full-scale, 1500' sideline, standard day
 Processing date: Mon Aug 18 18:58:54 1997

Data emb'd 14.70 psia
Data emb'd 537.0 R
Data emb'd 70.00%
Data scale 1

| Distance (m) | 1831.16 | 1732.05 | 1656.27 | 1552.91 | 1523.14 | 1502.73 | 1500 | 1506.73 | 1523.14 | 1522.91 | 1536.27 | 1655.07 | 1732.05 | 1831.16 | 1964.11 | 2121.32 | 2333.58 | 2615.17 | 3000 | 3540.3 | 4385.71 | 5765.55 |
|--------------|---------|---------|---------|---------|---------|---------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------|--------|---------|---------|
| Frequency | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 10 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 20 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 30 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 40 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 50 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 60 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 70 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 80 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 90 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 100 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 110 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 120 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 130 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 140 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 150 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 160 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 170 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 180 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 190 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 200 | 55 | 80 | 86 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 210 | 55 | | | | | | | | | | | | | | | | | | | | | |

310

| Quota until 14.70 p.m. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 |
|------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

312

[illegible]

313

Processing date: 2010-01-15 10:00:00

| Order | Distance (ft) | Angle (°) | Frequency (Hz) | Power (dBm) | SNR (dB) | Loss (dB) | Path Loss (dB) | Free Space Loss (dB) | Antenna Gain (dBi) | Receiver Sensitivity (dBm) | Transmit Power (dBm) | Link Budget (dB) | Margin (dB) | Notes |
|-------|---------------|-----------|----------------|-------------|----------|-----------|----------------|----------------------|--------------------|----------------------------|----------------------|------------------|-------------|-------|
| 1 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 2 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 3 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 4 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 5 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 6 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 7 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 8 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 9 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 10 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 11 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 12 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 13 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 14 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 15 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 16 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 17 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 18 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 19 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 20 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 21 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 22 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 23 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 24 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 25 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 26 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 27 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 28 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 29 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 30 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 31 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 32 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 33 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 34 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 35 | 150 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 150 |
| 36 | 150 | 55 | 55 | | | | | | | | | | | |

| g | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622</ |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|

NASA Lewis Allison AST Jet Noise Test 1996

| | |
|------------|----------------------------|
| rdg | 113 |
| run | 1 |
| test_prog | Allison6 |
| test_num | 3 |
| test_tack | LeRC APL |
| test_cust | Allison |
| lead_aero | Kathy Boyd |
| lead_acous | Kathy Boyd |
| lead_engnr | Ray Cashner |
| narrtbl | NATR full wedge |
| ngtbl | JER w/ external supplement |

bedtime 17:20:03
 **Scenario: Fly-over, full-scale, 1500' sideline, standard day
 Mon Aug 18 16:59:16 1997
 Reception date:

**"Scenario: Fly-over, N
Acceleration date:**

Data sent: 14.70 pairs

Data embodi 70.000%

1821

0

5302
64

100 54.03

| | |
|-----|-------|
| 100 | 52.27 |
| 200 | 54.5 |

230 34.00
320 57.44

500 57.73

800 59.5

1300 60.28
1600 62.28

2500 55.2%

4000 42.64

50

70.00
OASPL

100%L, 20UH

150 ft Polar: $SPL(\theta, f)$, $OASPL(\theta)$, $PWL(f)$, $OAPWL$
1500 ft Flyover: $SPL(\theta, f)$, $OASPL(\theta)$, $PNL(\theta)$, $EPNL$, $PWL(f)$, $OAPWL$
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

[Flyover data point A for 100%L, 20UH (file T443.xls) not processed]

| | |
|-----------|----------------------------|
| prog | 442 |
| run | 1 |
| test_prog | Alison88 |
| test_num | 3 |
| test_incl | LeRC APL |
| test_cust | Allison |
| test_aero | Kathy Boyd |
| test_accu | Kathy Boyd |
| test_engr | Ray Castner |
| matrid | NATR lub wedge |
| suppl | JER w/ external supplement |

bchtime 21:28:03
 **Scenario: 150 foot sec; 77F, 70%; Full scale; Third-octave SPL
 Processing date: Mon Aug 18 09:39:29 1997

Data amoiz 14.30 pais
Data amoiz 536.0 R
Data amoiz 70.00%
Data scale 1

[illegible]

1
2
3
4
5
6
7
8

Data ambler 14.30 peis

Data: armbt 538.0 A

Data symbol 70.000%

Data scale

THE

distance (m) 150

| | |
|-----|----|
| 150 | 55 |
| 100 | 55 |
| 50 | 55 |
| 25 | 55 |
| 10 | 55 |
| 5 | 55 |
| 2 | 55 |
| 1 | 55 |

new angle /
55 0

) odne po

frequency

80 81.8

100 23.08

130 84.24

100 84.71

100 95.73

200 82.72
250 85.38

男 74
女 58

320 15.74 05.91

400 85,21

500 88.28

030 588.2

500 98.9

1000 97.05

1300 ■ 7.27

| | |
|------|-------|
| 1300 | 01 21 |
| 1500 | 04 22 |

69 **000c**

0002

| | |
|------|------|
| 2500 | 88.6 |
| 2200 | 87.5 |

3200 07.51

4000 07.08

5000 85.0

84.56
6300

0000 03.12

| | |
|-------|-------|
| 10000 | 90.02 |
| 10000 | 90.02 |

655 06 1635 VU
670 06 000001

WASPI
W:22

325

326

[illegible]

327

| Distance: (| 1831.16 | 1722.05 | 1855.07 | 1598.27 | 1552.81 | 1523.14 | 1500.73 | 1500.73 | 1523.14 | 1552.81 | 1598.27 | 1855.07 | 1722.05 | 1831.16 | 1083.16 | 2121.32 | 2333.59 | 2015.17 | 3000 | 3549.3 | 4385.71 | 5795.55 |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|--------|---------|---------|
| year angle | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| not angle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| frequency | 35 | 80 | 35 | 30.4 | 30.56 | 30.51 | 41.75 | 41.06 | 43.81 | 43.54 | 43.78 | 43.29 | 43.18 | 43.02 | 44.67 | 43.25 | 41.29 | 39.65 | 37.74 | 35.81 | 33.52 | |
| 100 | 38.15 | 39.73 | 37.31 | 39.74 | 39.66 | 40.26 | 41.08 | 41.06 | 40.31 | 40.39 | 41.48 | 40.84 | 39.95 | 40.24 | 40.48 | 42.22 | 42.71 | 41.44 | 39.81 | 37.74 | 35.81 | |
| 110 | 39.32 | 40.90 | 38.48 | 40.91 | 40.83 | 41.43 | 42.25 | 42.23 | 41.48 | 41.56 | 42.65 | 41.99 | 41.08 | 41.37 | 41.61 | 43.35 | 43.84 | 42.57 | 40.94 | 38.81 | 36.88 | |
| 120 | 39.52 | 41.10 | 38.68 | 41.11 | 41.03 | 41.63 | 42.45 | 42.43 | 41.68 | 41.76 | 42.85 | 42.19 | 41.28 | 41.57 | 41.81 | 43.53 | 44.02 | 42.75 | 41.12 | 39.05 | 37.12 | |
| 130 | 39.72 | 41.30 | 38.89 | 41.31 | 41.23 | 41.83 | 42.65 | 42.63 | 41.88 | 41.96 | 43.05 | 42.39 | 41.48 | 41.77 | 42.01 | 43.75 | 44.24 | 42.97 | 41.34 | 39.21 | 37.28 | |
| 140 | 39.92 | 41.50 | 39.09 | 41.51 | 41.43 | 42.03 | 42.85 | 42.83 | 42.08 | 42.16 | 43.25 | 42.59 | 41.68 | 41.97 | 42.21 | 43.97 | 44.46 | 43.19 | 41.56 | 39.58 | 37.48 | |
| 150 | 40.12 | 41.70 | 39.29 | 41.71 | 41.63 | 42.23 | 43.05 | 43.03 | 42.28 | 42.36 | 43.45 | 42.79 | 41.88 | 42.17 | 42.41 | 44.13 | 44.62 | 43.35 | 41.76 | 39.78 | 37.68 | |
| 160 | 40.32 | 41.90 | 39.49 | 41.91 | 41.83 | 42.43 | 43.25 | 43.23 | 42.48 | 42.56 | 43.65 | 42.99 | 42.08 | 42.37 | 42.61 | 44.33 | 44.82 | 43.55 | 41.96 | 40.00 | 37.88 | |
| 170 | 40.52 | 42.10 | 39.69 | 42.11 | 42.03 | 42.63 | 43.45 | 43.43 | 42.68 | 42.76 | 43.85 | 43.19 | 42.28 | 42.57 | 42.81 | 44.53 | 45.02 | 43.75 | 42.16 | 40.20 | 38.08 | |
| 180 | 40.72 | 42.30 | 39.89 | 42.31 | 42.23 | 42.83 | 43.65 | 43.63 | 42.88 | 42.96 | 44.05 | 43.39 | 42.48 | 42.77 | 43.01 | 44.73 | 45.22 | 43.95 | 42.36 | 40.40 | 38.28 | |
| 190 | 40.92 | 42.50 | 40.09 | 42.51 | 42.43 | 43.03 | 43.85 | 43.83 | 43.08 | 43.16 | 44.25 | 43.59 | 42.68 | 42.97 | 43.21 | 44.93 | 45.42 | 44.15 | 42.56 | 40.60 | 38.48 | |
| 200 | 41.12 | 42.70 | 40.29 | 42.71 | 42.63 | 43.23 | 44.05 | 44.03 | 43.28 | 43.36 | 44.45 | 43.79 | 42.88 | 43.17 | 43.41 | 45.13 | 45.62 | 44.35 | 42.76 | 40.80 | 38.68 | |
| 210 | 41.32 | 42.90 | 40.49 | 42.91 | 42.83 | 43.43 | 44.25 | 44.23 | 43.48 | 43.56 | 44.65 | 43.99 | 43.08 | 43.37 | 43.61 | 45.33 | 45.82 | 44.55 | 42.96 | 41.00 | 38.88 | |
| 220 | 41.52 | 43.10 | 40.69 | 43.11 | 43.03 | 43.63 | 44.45 | 44.43 | 43.68 | 43.76 | 44.85 | 44.19 | 43.28 | 43.57 | 43.81 | 45.53 | 46.02 | 44.75 | 43.16 | 41.20 | 39.08 | |
| 230 | 41.72 | 43.30 | 40.89 | 43.31 | 43.23 | 43.83 | 44.65 | 44.63 | 43.88 | 43.96 | 45.05 | 44.39 | 43.48 | 43.77 | 44.01 | 45.73 | 46.22 | 44.95 | 43.36 | 41.40 | 39.28 | |
| 240 | 41.92 | 43.50 | 41.09 | 43.51 | 43.43 | 44.03 | 44.85 | 44.83 | 44.08 | 44.16 | 45.25 | 44.59 | 43.68 | 43. | | | | | | | | |

328

QASPM

Nighttime 20:57:15
 ***Scenario: Fly-over, full-scale, 1500 sideline, standard day
 Mon Aug 18 08:31:44 1997
 Processing date:

Data ambli 14.70 paia
Data ambli 597.0 R
Data ambli 70.00%
Data scale 1

| 1831 16 | 1722 05 | 1855 07 | 1598 27 | 1552 81 | 1523 14 | 1505 73 | 1500 | 1505 73 | 1523 14 | 1552 81 | 1598 27 | 1855 07 | 1722 05 | 1831 16 | 1523 14 | 2121 32 | 2333 38 | 2815 17 | 3000 | 3549 33 | 4385 71 | 5795 55 |
|---------|---------|---------|---------|---------|---------|---------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------|---------|---------|---------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | |
| 1831 16 | 1722 05 | 1855 07 | 1598 27 | 1552 81 | 1523 14 | 1505 73 | 1500 | 1505 73 | 1523 14 | 1552 81 | 1598 27 | 1855 07 | 1722 05 | 1831 16 | 1523 14 | 2121 32 | 2333 38 | 2815 17 | 3000 | 3549 33 | 4385 71 | 5795 55 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | |
| 1831 16 | 1722 05 | 1855 07 | 1598 27 | 1552 81 | 1523 14 | 1505 73 | 1500 | 1505 73 | 1523 14 | 1552 81 | 1598 27 | 1855 07 | 1722 05 | 1831 16 | 1523 14 | 2121 32 | 2333 38 | 2815 17 | 3000 | 3549 33 | 4385 71 | 5795 55 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | |
| 1831 16 | 1722 05 | 1855 07 | 1598 27 | 1552 81 | 1523 14 | 1505 73 | 1500 | 1505 73 | 1523 14 | 1552 81 | 1598 27 | 1855 07 | 1722 05 | 1831 16 | 1523 14 | 2121 32 | 2333 38 | 2815 17 | 3000 | 3549 33 | 4385 71 | 5795 55 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | |
| 1831 16 | 1722 05 | 1855 07 | 1598 27 | 1552 81 | 1523 14 | 1505 73 | 1500 | 1505 73 | 1523 14 | 1552 81 | 1598 27 | 1855 07 | 1722 05 | 1831 16 | 1523 14 | 2121 32 | 2333 38 | 2815 17 | 3000 | 3549 33 | 4385 71 | 5795 55 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | |
| 1831 16 | 1722 05 | 1855 07 | 1598 27 | 1552 81 | 1523 14 | 1505 73 | 1500 | 1505 73 | 1523 14 | 1552 81 | 1598 27 | 1855 07 | 1722 05 | 1831 16 | 1523 14 | 2121 32 | 2333 38 | 2815 17 | 3000 | 3549 33 | 4385 71 | 5795 55 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | |
| 1831 16 | 1722 05 | 1855 07 | 1598 27 | 1552 81 | 1523 14 | 1505 73 | 1500 | 1505 73 | 1523 14 | 1552 81 | 1598 27 | 1855 07 | 1722 05 | 1831 16 | 1523 14 | 2121 32 | 2333 38 | 2815 17 | 3000 | 3549 33 | 4385 71 | 5795 55 |
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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
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| Data sample | 14.70 pairs |
| Data sample | 537.0 R |
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***Scenario: Fly-over, full-scale, 1500' sideline, standard day
Mon Aug 18 09:50:11 1997
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| Data arriba | 14.70 pais |
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| Data scale | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | |
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Date: 14/30/2024

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| 130 | 75.54 |
| 160 | 76.19 |

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| 320 | 79.43 |
| 400 | 80.12 |

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| 800 | 84.5 |
| 1,000 | 84.92 |

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| test_kary131 | Kelly Boyd | |
| test_kary132 | head_sens | |
| test_kary133 | Kelly Boyd | |
| test_kary134 | head_sens | |
| test_kary135 | Kelly Boyd | |
| test_kary136 | head_sens | |
| test_kary137 | Kelly Boyd | |
| test_kary138 | head_sens | |
| test_kary139 | Kelly Boyd | |
| test_kary140 | head_sens | |
| test_kary141 | Kelly Boyd | |
| test_kary142 | head_sens</ | |

Data anni: 14.70 paia
 Data anni: 537.0 R
 Data anni: 70.00%
 Data scale: 1

[illegible]

100%L, 20MH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

[illegible]

Data ambix 14.30 pela
Data ambix 538.0 R
Data ambix 70.00%

Data scale 1

3

distance: (150 55 051)

not available ()
year range 0 33

frequency 55

80 62.87

| | |
|-----|-------|
| 100 | 62.73 |
| 130 | 62.39 |

| | |
|-----|-------|
| 130 | 63.30 |
| 120 | 65.50 |

100 200 300 400 500 600 700 800 900 1000

250 87.19

320 07.80

| | |
|-----|-------|
| 400 | 66.22 |
| 500 | 69.50 |

05'00 005
05'00 030

800 60,57

1000 68,35

| | |
|------|-------|
| 1300 | 65.21 |
| 1300 | 65.21 |

| | |
|------|-------|
| 1600 | 64.33 |
| 2000 | 63.38 |

| | |
|------|-------|
| 2500 | 62.80 |
| 2000 | 62.80 |

| | |
|------|-------|
| 3200 | 62.01 |
|------|-------|

4000 51.11

| | |
|------|-------|
| 5000 | 60.13 |
| 3000 | 59.52 |

| | |
|------|-------|
| 0000 | 59.05 |
| 0000 | 59.05 |

10000 58.91

0ASPL 7B.03

[illegible]

Date: 08/14/2014 14:30:00

Data Input: 537.0 A

70.00%

Data scale 1

1999 18

NEW FROM 55

roll angle (°) 0

frequency

41,000 40,000

| | |
|-----|-------|
| 100 | 40.31 |
| 130 | 41.48 |

180 49.83

200 44.21

88 8
4 2

88 8
4 2

| | |
|-----|-------|
| 120 | 45.38 |
| 100 | 43.38 |

43.3 500

630 42.78

800 42.21

| | |
|-------|-------|
| 1,000 | 41.44 |
| 1,300 | 39.88 |

1300 38.12

38.31
2000

2500 34.4

| | |
|------|-------|
| 3200 | 31.94 |
| 1000 | 31.97 |

| | |
|------|-------|
| 4000 | 26.27 |
| 5000 | 22.62 |

6300 0

0 0000

000001
51 95
0

| | |
|--------|-------|
| UNUSFL | 34 30 |
| PMI | 59 78 |

1

run 338
test_prog Mission6
test_num 3
test_fac LARC APL
test_cdr Allison
test_aero Kathy Boyd
test_accu Kelly Boyd
test_engr Bill Custer
test_obj NASA full wedge
test_ref JET w/ external supplement
test_mtd MD20
test_mtd BASE
test_mtd 41.226
test_mtd 36.02
test_mtd 78.39
test_mtd 4
test_mtd 813.27
test_mtd 0.52641
test_mtd 1.43417
test_mtd 499.755
test_mtd 64.85
test_mtd 0
test_mtd 1.389
test_mtd 1.442
test_mtd 18.8234
test_mtd 20.6836
test_mtd 2.657
test_mtd 13.06
test_mtd 1160.86
test_mtd 455.085
test_mtd 20.36
test_mtd 604.032
test_mtd 0.677423
test_mtd 13335.4
test_mtd [26]
test_mtd 331
test_mtd 02 Dec 96
test_mtd 17:40:59
test_mtd CAOSdate 97.06.18
test_mtd CAOStime 17:40:56
test_mtd CAOSdate 02 Dec 96
test_mtd CAOStime 17:40:56
test_mtd CAOSdate 02 Dec 96
test_mtd CAOStime 17:40:56

--Sample 150 foot sec: 77F, 70% Full scale; Third-Octave SPL

Processing date: Mon Aug 18 10:27:58 1997

Date amb: 14.30 psia

Date amb: 508.0 R

Date amb: 70.00%

Date scale

Distance: (

view angle: 55

rot angle: 0

frequency: 5

100 74.62

130 74.52

180 76.01

200 77.17

250 77.13

300 77.78

350 77.55

400 77.42

450 77.4

500 77.4

550 77.4

600 77.4

650 77.4

700 77.4

750 77.4

800 77.4

850 77.4

900 77.4

950 77.4

1000 77.4

1050 77.4

1100 77.4

1150 77.4

1200 77.4

1250 77.4

1300 77.4

1350 77.4

1400 77.4

1450 77.4

1500 77.4

1550 77.4

1600 77.4

1650 77.4

1700 77.4

1750 77.4

1800 77.4

1850 77.4

1900 77.4

1950 77.4

2000 77.4

2050 77.4

2100 77.4

2150 77.4

2200 77.4

2250 77.4

2300 77.4

35

DATE COMPLETED: 11/1/2010

view angle

Frequency 30

130 58.13

200 58.97

320

| | |
|-------|---|
| 64.02 | 3 |
| 64.01 | 3 |
| 64.00 | 3 |

800 64.59
1000

1600 61.55

2500 59.36

| | |
|------|-------|
| 4000 | 53.48 |
| 5000 | 52.88 |

59 27 59 27

OASPL 75.00

351

1

353

| | |
|-------------|------------|
| Data ambles | 14.30 pais |
| Data ambles | 536.0 A |
| Data ambles | 70.00% |
| Data scales | 1 |

Author's address:

distance: (1) 051

yaw angle 55

roll angle (°)

frequency 55

80 85.7

18 19

| | |
|-----|-------|
| 130 | 69.77 |
| 100 | 70.91 |

| | |
|-----|-------|
| 180 | 70.33 |
| 300 | 70.87 |

| | |
|-----|-------|
| 200 | 75.67 |
| 250 | 72.12 |

72 93

400 72.02

500 73.47

830 73.01

800 75.29

| | |
|------|-------|
| 1000 | 76.30 |
| 1000 | 75.51 |

| | |
|------|-------|
| 1300 | 76.51 |
| 1900 | 77.94 |

| | |
|------|-------|
| 1600 | 77.36 |
| 2000 | 76.31 |

| | |
|------|------|
| 2000 | 74.2 |
| 2500 | 74.2 |

3200 72.50

4000 71.05

5000 71.02

6300 70.31

Pd-69

000001
100000

045041

[illegible]

Data ambis 14.70 pela
Data ambis 537.0 R
Data ambis 70.00%
Data scale 1

[illegible]

[illegible]

Data ambis 14.30 psda
Data ambis 536.0 fi
Data ambis 70.00%
Data scale 1

| distance (°) | 150 | 160 | 170 | 180 | 190 | 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 | 280 | 290 | 300 | 310 | 320 | 330 | 340 | 350 | 360 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ray angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| ray length (mm) | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | 210 | 220 | 230 | 240 | 250 | 260 |
| 100 | 72.44 | 73.47 | 74.53 | 75.68 | 75.98 | 75.35 | 77.11 | 76.6 | 78.06 | 78.38 | 76.63 | 77.38 | 78.05 | 78.81 | 79.65 | 80.57 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 |
| 110 | 73.67 | 74.44 | 75.03 | 75.66 | 76.58 | 77.5 | 77.11 | 76.6 | 78.64 | 77.06 | 77.77 | 78.56 | 78.4 | 80.35 | 80.25 | 81.06 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 |
| 120 | 73.81 | 74.2 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | 78.07 | 77.77 | 78.56 | 78.4 | 80.76 | 80.76 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 | 86.42 |
| 130 | 74.03 | 74.23 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | 78.07 | 77.77 | 78.56 | 78.4 | 80.76 | 80.76 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 | 86.42 |
| 140 | 74.23 | 74.23 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | 78.07 | 77.77 | 78.56 | 78.4 | 80.76 | 80.76 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 | 86.42 |
| 150 | 74.44 | 74.44 | 75.03 | 75.66 | 76.58 | 77.5 | 77.11 | 76.6 | 78.64 | 77.06 | 77.77 | 78.56 | 78.4 | 80.35 | 80.25 | 81.06 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 |
| 160 | 74.72 | 74.72 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | 78.07 | 77.77 | 78.56 | 78.4 | 80.76 | 80.76 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 | 86.42 |
| 170 | 75.03 | 75.03 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | 78.07 | 77.77 | 78.56 | 78.4 | 80.76 | 80.76 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 | 86.42 |
| 180 | 75.23 | 75.23 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | 78.07 | 77.77 | 78.56 | 78.4 | 80.76 | 80.76 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 | 86.42 |
| 190 | 75.44 | 75.44 | 75.03 | 75.66 | 76.58 | 77.5 | 77.11 | 76.6 | 78.64 | 77.06 | 77.77 | 78.56 | 78.4 | 80.35 | 80.25 | 81.06 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 |
| 200 | 75.66 | 75.66 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | 78.07 | 77.77 | 78.56 | 78.4 | 80.76 | 80.76 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 | 86.42 |
| 210 | 75.82 | 75.82 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | 78.07 | 77.77 | 78.56 | 78.4 | 80.76 | 80.76 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 | 86.42 |
| 220 | 76.03 | 76.03 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | 78.07 | 77.77 | 78.56 | 78.4 | 80.76 | 80.76 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 | 86.42 |
| 230 | 76.23 | 76.23 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | 78.07 | 77.77 | 78.56 | 78.4 | 80.76 | 80.76 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 | 86.42 |
| 240 | 76.44 | 76.44 | 75.03 | 75.66 | 76.58 | 77.5 | 77.11 | 76.6 | 78.64 | 77.06 | 77.77 | 78.56 | 78.4 | 80.35 | 80.25 | 81.06 | 81.55 | 82.56 | 83.15 | 83.96 | 84.78 | 85.61 |
| 250 | 76.66 | 76.66 | 75.23 | 75.83 | 75.82 | 75.3 | 75.22 | 75.28 | 75.54 | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

Data अभी 14.70 पास
Data अभी 537.0 R
Data अभी 70.00%

[illegible]

```

run 342
test_prog Allison04
test_eng Allison04
test_jet LEPC AP1
test_cust Allison
lead_aero Kathy Boyd
lead_acou Kathy Boyd
lead_eng Ray Calisher
nailed NATH full wedge
rigid JER w/ external supplement
misled MD20
nocho BASE
anoz 41.228
anac 25.125
anad 78.39
scale 4
vdi 881.42
m01 0.1693
pamb 14.3053
lamb 488.595
rumb 71.14
vmb 0
nrc 1.743
nrcb 1.823
pc 24.9062
pr 26.0597
wmb 3.322
wmbb 18.218
ic 1404.3
ib 503.333
jmb 25.9083
lmb 639.081
magnb 0.791831
grainp 2.1052.4
beachan [28]
bigrnd 332
secdate 02 Dec 98
secdate 18 Dec 98
DASDate 07 Dec 98
DASDate 18 Dec 98
DASDate 02 Dec 98
biotime 18 Dec 98

```

--Scenario: 150 foot sec; 77F, 70% Full scale Third octave SPL
Processing date: Mon Aug 18 10:25:12 1997

Data emb: 14.30 psia
Data emb: 536.0 R
Data emb: 70.00%

Data scale: 1

Distance: ft

View angle: (

Rot angle: (

Frequency

150

150

150

150

150

150

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| id | 342 |
| in | 1 |
| test_prog | Alison86 |
| test_num | 3 |
| test_facil | LeRC AP1 |
| test_cust | Alison |
| test_aero | Kathy Boyd |
| test_acou | Kathy Boyd |
| test_engr | Ray Casner |
| aerbid | NATW/tut wedge |
| acbid | JERW/external supplement |

[illegible]

run 347 1
test_prog Allison96
test_num 3
test_tecr LARC APL
test_csr Allison
lead_sero Mary Boyd
lead_csr Mary Boyd
lead_engr Ray Casler
nptrid MATR full wedge
nptrid JER w/ external supplement
nptrid MOD20
nptrid BASE
enoz 41.226
enoz 35.02
enoz 78.39
scale 4
vd 811.6
vd 0.2999
pwrp 14.2582
lrrb 486.865
rhmd 72.28
rhmd1 0
nptrc 1.39
nptrc 1.446
pfc 18.8169
pfb 20.8174
wscd 2.562
wscd 1.3395
wscd 1.466
wscd 504.417
prrs 20.4892
prrs 813.325
magnp 0.689453
magnp 1.2951.8
backhan [28]
bignd 333
escdate 02 Dec 96
escdate 18 Dec 96
OASDdate 02 Dec 96
OASDdate 18 Dec 96
bchdate 02 Dec 96
bchdate 18 Dec 96

--Spectrum: 150 foot arc; 77F, 70% Full scale; Third-octave SPL
Processing date: Mon Aug 18 10:36:17 1997

Delta amb 14.30 psi
Delta amb 538.0 ft
Delta amb 70.00%

Delta scale

Distance: (

year angle: (

rot angle: (

frequency

100

150

200

250

300

350

400

450

500

550

600

650

700

750

800

850

900

950

1000

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1100

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1200

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1300

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1500

1550

1600

1650

1700

1750

1800

1850

1900

1950

2000

2050

2100

2150

2200

2250

2300

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2400

2450

2500

2550

2600

2650

2700

2750

2800

2850

2900

2950

3000

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|------------|----------------------------|
| rdg | 347 |
| run | 1 |
| test_prog | Allison6 |
| test_num | 3 |
| test_facil | LeRC APL |
| test_cuar | Allison |
| lead_sero | Kathy Boyd |
| lead_acou | Kathy Boyd |
| lead_engr | Ray Geisner |
| nebird | NATR full wedge |
| supplmnt | JER w/ external supplement |

[illegible]

| | |
|------------|------------|
| Data simba | 14.70 psia |
| Data simba | 537.0 R |
| Data simba | 70.00% |
| Data scale | 1 |

[illegible]


```

run 348
test_prog Almond6
test_num 3
test_unit LARC APL
test_date 19860825
test_loc ALBANY
test_son Kathy Boyd
test_son2 Kathy Boyd
test_son3 Ray Claster
test_son4 NATR full wedge
test_son5 JER full external supplement
test_son6 MODO
test_son7 BASE
test_son8 41254
test_son9 35102
test_son10 7839
test_son11 4
test_son12 50372
test_son13 0.28953
test_son14 14.2532
test_son15 495.598
test_son16 70.178
test_son17 1.54
test_son18 1.815
test_son19 21.853
test_son20 23.0021
test_son21 2.86
test_son22 15.721
test_son23 123.142
test_son24 150.514
test_son25 22.8578
test_son26 630.546
test_son27 0.756403
test_son28 17348.5
test_son29 333
test_son30 333
test_son31 02 Dec 96
test_son32 19860825
test_son33 DATSdate 07 08 25
test_son34 DATSdate 18 08 25
test_son35 backfire 02 Dec 96
test_son36 backfire 18 08 25
test_son37 backfire 18 08 25
test_son38 backfire 18 08 25
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test_son96 backfire 18 08 25
test_son97 backfire 18 08 25
test_son98 backfire 18 08 25
test_son99 backfire 18 08 25
test_son100 backfire 18 08 25

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Data date: 14 70 pole
Data time: 237.0 0 0 0
Data loc: 70 100%
Data scale: 1
Data unit: 1
Data test: 1
Data test_num: 1
Data test_date: 19860825
Data test_loc: ALBANY
Data test_son: Kathy Boyd
Data test_son2: Kathy Boyd
Data test_son3: Ray Claster
Data test_son4: NATR full wedge
Data test_son5: JER full external supplement
Data test_son6: MODO
Data test_son7: BASE
Data test_son8: 41254
Data test_son9: 35102
Data test_son10: 7839
Data test_son11: 4
Data test_son12: 50372
Data test_son13: 0.28953
Data test_son14: 14.2532
Data test_son15: 495.598
Data test_son16: 70.178
Data test_son17: 1.54
Data test_son18: 1.815
Data test_son19: 21.853
Data test_son20: 23.0021
Data test_son21: 2.86
Data test_son22: 15.721
Data test_son23: 123.142
Data test_son24: 150.514
Data test_son25: 22.8578
Data test_son26: 630.546
Data test_son27: 0.756403
Data test_son28: 17348.5
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Data test_son99: backfire 18 08 25
Data test_son100: backfire 18 08 25

```


100%L, 20DH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

368

[illegible]

[illegible]

[illegible]

Data ambis 14.30 pels
Data ambis 536.0 R
Data ambis 70.00%
Data scale 1

[illegible]

[illegible]

Data ambia 14.30 pada
 Data ambia 5.35 O R
 Data ambia 70.00%
 Data scale !

Data scale :

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distance: (1) 150 m

new engine 7
old engine 3

[illegible]

frequency/

100 59.39

130 50.10

100 85.0

200 50.02

250 63.0

320 64.42
188 63.19

| | |
|-----|-------|
| 400 | 82.46 |
| 500 | 83.18 |

23 23
23 23

000

1000 03.16

1300 01.89

1600 61.2

| | |
|------|-------|
| 2000 | 60.65 |
| 2001 | 61.15 |

| | |
|------|-------|
| 2500 | 60.19 |
| 5000 | 60.94 |

59.84 59.49

| | |
|------|------|
| 3648 | 5000 |
| 5781 | 5000 |

1300 **\$7.50**

57.77

100000 57.32

| | |
|-------|-------|
| OASPL | 74.85 |
|-------|-------|

377

| data series 1: 4.70 mps | data series 2: 5.27 mps | data series 3: 5.77 mps | data series 4: 6.27 mps | data series 5: 6.77 mps | data series 6: 7.27 mps | data series 7: 7.77 mps | data series 8: 8.27 mps | data series 9: 8.77 mps | data series 10: 9.27 mps | data series 11: 9.77 mps | data series 12: 10.27 mps | data series 13: 10.77 mps | data series 14: 11.27 mps | data series 15: 11.77 mps | data series 16: 12.27 mps | data series 17: 12.77 mps | data series 18: 13.27 mps | data series 19: 13.77 mps | data series 20: 14.27 mps | data series 21: 14.77 mps | data series 22: 15.27 mps | data series 23: 15.77 mps | data series 24: 16.27 mps | data series 25: 16.77 mps | data series 26: 17.27 mps | data series 27: 17.77 mps | data series 28: 18.27 mps | data series 29: 18.77 mps | data series 30: 19.27 mps | data series 31: 19.77 mps | data series 32: 20.27 mps | data series 33: 20.77 mps | data series 34: 21.27 mps | data series 35: 21.77 mps | data series 36: 22.27 mps | data series 37: 22.77 mps | data series 38: 23.27 mps | data series 39: 23.77 mps | data series 40: 24.27 mps | data series 41: 24.77 mps | data series 42: 25.27 mps | data series 43: 25.77 mps | data series 44: 26.27 mps | data series 45: 26.77 mps | data series 46: 27.27 mps | data series 47: 27.77 mps | data series 48: 28.27 mps | data series 49: 28.77 mps | data series 50: 29.27 mps | data series 51: 29.77 mps | data series 52: 30.27 mps | data series 53: 30.77 mps | data series 54: 31.27 mps | data series 55: 31.77 mps | data series 56: 32.27 mps | data series 57: 32.77 mps | data series 58: 33.27 mps | data series 59: 33.77 mps | data series 60: 34.27 mps | data series 61: 34.77 mps | data series 62: 35.27 mps | data series 63: 35.77 mps | data series 64: 36.27 mps | data series 65: 36.77 mps | data series 66: 37.27 mps | data series 67: 37.77 mps | data series 68: 38.27 mps | data series 69: 38.77 mps | data series 70: 39.27 mps | data series 71: 39.77 mps | data series 72: 40.27 mps | data series 73: 40.77 mps | data series 74: 41.27 mps | data series 75: 41.77 mps | data series 76: 42.27 mps | data series 77: 42.77 mps | data series 78: 43.27 mps | data series 79: 43.77 mps | data series 80: 44.27 mps | data series 81: 44.77 mps | data series 82: 45.27 mps | data series 83: 45.77 mps | data series 84: 46.27 mps | data series 85: 46.77 mps | data series 86: 47.27 mps | data series 87: 47.77 mps | data series 88: 48.27 mps | data series 89: 48.77 mps | data series 90: 49.27 mps | data series 91: 49.77 mps | data series 92: 50.27 mps | data series 93: 50.77 mps | data series 94: 51.27 mps | data series 95: 51.77 mps | data series 96: 52.27 mps | data series 97: 52.77 mps | data series 98: 53.27 mps | data series 99: 53.77 mps | data series 100: 54.27 mps | data series 101: 54.77 mps | data series 102: 55.27 mps | data series 103: 55.77 mps | data series 104: 56.27 mps | data series 105: 56.77 mps | data series 106: 57.27 mps | data series 107: 57.77 mps | data series 108: 58.27 mps | data series 109: 58.77 mps | data series 110: 59.27 mps | data series 111: 59.77 mps | data series 112: 60.27 mps | data series 113: 60.77 mps | data series 114: 61.27 mps | data series 115: 61.77 mps | data series 116: 62.27 mps | data series 117: 62.77 mps | data series 118: 63.27 mps | data series 119: 63.77 mps | data series 120: 64.27 mps | data series 121: 64.77 mps | data series 122: 65.27 mps | data series 123: 65.77 mps | data series 124: 66.27 mps | data series 125: 66.77 mps | data series 126: 67.27 mps | data series 127: 67.77 mps | data series 128: 68.27 mps | data series 129: 68.77 mps | data series 130: 69.27 mps | data series 131: 69.77 mps | data series 132: 70.27 mps | data series 133: 70.77 mps | data series 134: 71.27 mps | data series 135: 71.77 mps | data series 136: 72.27 mps | data series 137: 72.77 mps | data series 138: 73.27 mps | data series 139: 73.77 mps | data series 140: 74.27 mps | data series 141: 74.77 mps | data series 142: 75.27 mps | data series 143: 75.77 mps | data series 144: 76.27 mps | data series 145: 76.77 mps | data series 146: 77.27 mps | data series 147: 77.77 mps | data series 148: 78.27 mps | data series 149: 78.77 mps | data series 150: 79.27 mps | data series 151: 79.77 mps | data series 152: 80.27 mps | data series 153: 80.77 mps | data series 154: 81.27 mps | data series 155: 81.77 mps | data series 156: 82.27 mps | data series 157: 82.77 mps | data series 158: 83.27 mps | data series 159: 83.77 mps | data series 160: 84.27 mps | data series 161: 84.77 mps | data series 162: 85.27 mps | data series 163: 85.77 mps | data series 164: 86.27 mps | data series 165: 86.77 mps | data series 166: 87.27 mps | data series 167: 87.77 mps | data series 168: 88.27 mps | data series 169: 88.77 mps | data series 170: 89.27 mps | data series 171: 89.77 mps | data series 172: 90.27 mps | data series 173: 90.77 mps | data series 174: 91.27 mps | data series 175: 91.77 mps | data series 176: 92.27 mps | 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390

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75%L, 12TH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: B, C, D, F, G, H, J, K, L

393

| Distance (m) | Angle (°) | Frequency | Power (dBm) | SNR (dB) | QoS |
|--------------|-----------|-----------|-------------|----------|-----|
| 150 | 150 | 150 | 150 | 150 | 150 |
| 160 | 160 | 160 | 160 | 160 | 160 |
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| 790 | 790 | 790 | 790 | 790 | 790 |
| 800 | 800 | 800 | 800 | 800 | 800 |
| 810 | 810 | 810 | 810 | 810 | 810 |
| 820 | 820 | 820 | 820 | 820 | 820 |
| 830 | 830 | 830 | 830 | 830 | 830 |
| 840 | 840 | 840 | 840 | 840 | 840 |
| 850 | 850 | 850 | 850 | 850 | 850 |
| 860 | 860 | 860 | 860 | 860 | 860 |
| 870 | 870 | 870 | 870 | 870 | 870 |
| 880 | 880 | 880 | 880 | 880 | 880 |
| 890 | 890 | 890 | 890 | 890 | 890 |
| 900 | 900 | 900 | 900 | 900 | 9 |

| | |
|-----------|----------------------------|
| dg | 489 |
| un | 1 |
| test_prog | Allison88 |
| test_num | 3 |
| test_lact | LeRC APL |
| test_cust | Allison |
| read_aero | Kathy Boyd |
| read_abou | Kathy Boyd |
| read_engr | Ray Castner |
| readbul | NATR bulb wedge |
| read | JEF w/ external supplement |

bchtime 20:42:20
 **Scenario: Fly-over, full-scale, 1500' sideline, standard day
 Processing date: Wed Aug 20 05:55:32 1997

Scenario: Fly-over
Compass data:

Ques. Answer 14 70 Body

Data arrived 5:37.0 A

| Date | Arrival | 70.00% |
|------|---------|--------|
|------|---------|--------|

Data Source

Distance: (1837.16

55

Academic Year 2005-2006

80 48.83

| | |
|-----|-------|
| 100 | 51.26 |
| 130 | 50.45 |

| | |
|-----|-------|
| 130 | 50.43 |
| 180 | 51.80 |

200 52.56

250 53.16

33 54.47
400 54.15

500 54.39

630 54.17
630 54.28

54.84
54.84

1300 \$4.47

1600 53.87
2000 53.02

2500 51.98

| | | |
|------|------|-------|
| 1998 | 1200 | 49.66 |
| 1999 | 1300 | 49.54 |

| | |
|------|-------|
| 4000 | 46.54 |
| 5000 | 41.45 |

33.42

20.08

| | |
|--------|-------|
| QASPL | 85.53 |
| 100000 | 0 |

PMU 75.19

| Year | 1871 | 1881 | 1891 | 1901 | 1911 | 1921 | 1931 | 1941 | 1951 | 1961 | 1971 | 1981 | 1991 | 2001 | 2011 | 2021 | 2031 | 2041 | 2051 | 2061 | 2071 | 2081 | 2091 | 2101 | 2111 | 2121 | 2131 | 2141 | 2151 | 2161 | 2171 | 2181 | 2191 | 2201 | 2211 | 2221 | 2231 | 2241 | 2251 | 2261 | 2271 | 2281 | 2291 | 2301 | 2311 | 2321 | 2331 | 2341 | 2351 | 2361 | 2371 | 2381 | 2391 | 2401 | 2411 | 2421 | 2431 | 2441 | 2451 | 2461 | 2471 | 2481 | 2491 | 2501 | 2511 | 2521 | 2531 | 2541 | 2551 | 2561 | 2571 | 2581 | 2591 | 2601 | 2611 | 2621 | 2631 | 2641 | 2651 | 2661 | 2671 | 2681 | 2691 | 2701 | 2711 | 2721 | 2731 | 2741 | 2751 | 2761 | 2771 | 2781 | 2791 | 2801 | 2811 | 2821 | 2831 | 2841 | 2851 | 2861 | 2871 | 2881 | 2891 | 2901 | 2911 | 2921 | 2931 | 2941 | 2951 | 2961 | 2971 | 2981 | 2991 | 3001 | 3011 | 3021 | 3031 | 3041 | 3051 | 3061 | 3071 | 3081 | 3091 | 3101 | 3111 | 3121 | 3131 | 3141 | 3151 | 3161 | 3171 | 3181 | 3191 | 3201 | 3211 | 3221 | 3231 | 3241 | 3251 | 3261 | 3271 | 3281 | 3291 | 3301 | 3311 | 3321 | 3331 | 3341 | 3351 | 3361 | 3371 | 3381 | 3391 | 3401 | 3411 | 3421 | 3431 | 3441 | 3451 | 3461 | 3471 | 3481 | 3491 | 3501 | 3511 | 3521 | 3531 | 3541 | 3551 | 3561 | 3571 | 3581 | 3591 | 3601 | 3611 | 3621 | 3631 | 3641 | 3651 | 3661 | 3671 | 3681 | 3691 | 3701 | 3711 | 3721 | 3731 | 3741 | 3751 | 3761 | 3771 | 3781 | 3791 | 3801 | 3811 | 3821 | 3831 | 3841 | 3851 | 3861 | 3871 | 3881 | 3891 | 3901 | 3911 | 3921 | 3931 | 3941 | 3951 | 3961 | 3971 | 3981 | 3991 | 4001 | 4011 | 4021 | 4031 | 4041 | 4051 | 4061 | 4071 | 4081 | 4091 | 4101 | 4111 | 4121 | 4131 | 4141 | 4151 | 4161 | 4171 | 4181 | 4191 | 4201 | 4211 | 4221 | 4231 | 4241 | 4251 | 4261 | 4271 | 4281 | 4291 | 4301 | 4311 | 4321 | 4331 | 4341 | 4351 | 4361 | 4371 | 4381 | 4391 | 4401 | 4411 | 4421 | 4431 | 4441 | 4451 | 4461 | 4471 | 4481 | 4491 | 4501 | 4511 | 4521 | 4531 | 4541 | 4551 | 4561 | 4571 | 4581 | 4591 | 4601 | 4611 | 4621 | 4631 | 4641 | 4651 | 4661 | 4671 | 4681 | 4691 | 4701 | 4711 | 4721 | 4731 | 4741 | 4751 | 4761 | 4771 | 4781 | 4791 | 4801 | 4811 | 4821 | 4831 | 4841 | 4851 | 4861 | 4871 | 4881 | 4891 | 4901 | 4911 | 4921 | 4931 | 4941 | 4951 | 4961 | 4971 | 4981 | 4991 | 5001 | 5011 | 5021 | 5031 | 5041 | 5051 | 5061 | 5071 | 5081 | 5091 | 5101 | 5111 | 5121 | 5131 | 5141 | 5151 | 5161 | 5171 | 5181 | 5191 | 5201 | 5211 | 5221 | 5231 | 5241 | 5251 | 5261 | 5271 | 5281 | 5291 | 5301 | 5311 | 5321 | 5331 | 5341 | 5351 | 5361 | 5371 | 5381 | 5391 | 5401 | 5411 | 5421 | 5431 | 5441 | 5451 | 5461 | 5471 | 5481 | 5491 | 5501 | 5511 | 5521 | 5531 | 5541 | 5551 | 5561 | 5571 | 5581 | 5591 | 5601 | 5611 | 5621 | 5631 | 5641 | 5651 | 5661 | 5671 | 5681 | 5691 | 5701 | 5711 | 5721 | 5731 | 5741 | 5751 | 5761 | 5771 | 5781 | 5791 | 5801 | 5811 | 5821 | 5831 | 5841 | 5851 | 5861 | 5871 | 5881 | 5891 | 5901 | 5911 | 5921 | 5931 | 5941 | 5951 | 5961 | 5971 | 5981 | 5991 | 6001 | 6011 | 6021 | 6031 | 6041 | 6051 | 6061 | 6071 | 6081 | 6091 | 6101 | 6111 | 6121 | 6131 | 6141 | 6151 | 6161 | 6171 | 6181 | 6191 | 6201 | 6211 | 6221 | 6231 | 6241 | 6251 | 6261 | 6271 | 6281 | 6291 | 6301 | 6311 | 6321 | 6331 | 6341 | 6351 | 6361 | 6371 | 6381 | 6391 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

396

| | |
|------------|------------|
| Data ambig | 14.70 pols |
| Data ambig | 537.0 R |
| Data ambig | 70.00% |
| Data scale | 1 |

| | |
|-------------|----------------------------|
| prog | 471 |
| run | 1 |
| testl_prog | Alison98 |
| testl_num | 3 |
| testl_facil | LePC AP1 |
| testl_cust | Alison |
| testl_sero | Kathy Boyd |
| testl_szas | Kathy Boyd |
| testl_engr | Ray Cashner |
| testl_mat | NATR Jul wedge |
| testl_w_ext | JER w/ external supplement |

bichrome 21:01:28
 Scenario: Fly-over, full-scale, 1500' timeline, standard day
 Wed Aug 20 08:00:21 1997
 Processing date:

Data ambou 14.70 psola

Data ambient S37.0 R

| Data source | 10,000 | 1 |
|-------------|--------|---|
| Data scale | | |

...

distance: 1831.16
view angle: 55

roll angle (°)

| | |
|-----------|------|
| frequency | 55 |
| 80 | 59.7 |

100 59.87

| | |
|-----|-------|
| 130 | 61 87 |
| 180 | 62 31 |

100 62.97

| | |
|-----|-------|
| 250 | 62.55 |
| 200 | 12.38 |

| | |
|-----|-------|
| 320 | 62.38 |
| 400 | 62.14 |

500

215 200

1,000 63.43

| | |
|------|-------|
| 1300 | 69.44 |
| 1600 | 62.75 |

2000 62.05

| | |
|------|-------|
| 2500 | 60.23 |
| 3200 | 57.59 |

4000 54.15

| | |
|------|-------|
| 5000 | 49.59 |
| 5300 | 49.59 |

29.37

CASED
74.51
10000
6

PMK

[illegible]

Data arrive 14.30 pada

| | |
|----------------|---------|
| Data amplitudo | 538,0 A |
| Data amplitudo | 70,00% |

Data scale 1

LONG TERM

distance (ft) 150

yaw angle 55

roll angle (θ)

| | |
|------------|-------|
| frequency: | 55 |
| | 84.17 |

80 64.17
100 68.37

| | |
|-----|-------|
| 100 | 66 27 |
| 130 | 89 48 |

| | |
|-----|-------|
| 130 | 09.48 |
| 180 | 09.71 |

100 200 72.15

250 73 91

320 73.27

400 70,300

630 77.13
630 79.45

800 79 45
1000 79 95

| | |
|------|-------|
| 1600 | 74 80 |
| 1300 | 81 |

| | |
|------|------|
| 1600 | 80.8 |
| 1300 | 80.8 |

2000 01.42

0062
1110

3200 9' 10"

4000 79 79 79 41

| | |
|------|-------|
| 5000 | 70.41 |
| 1300 | 77.03 |

| | |
|------|-------|
| 6300 | 77 03 |
| 8000 | 75 86 |

| | |
|-------|-------|
| 10000 | 72.95 |
| 10000 | 73.80 |

01.20
OASPL

•

[illegible]

Scenario: Fly-over, full-scale, 1500' sideline, standard day
Processing date: Wed Aug 20 06:03:26 1997

| | |
|--------------|------------|
| Order number | 14.70 psia |
| Data number | 537.0 R |
| Data number | 70.00% |
| Data scale | 1 |

[illegible]

[illegible][illegible]

| | |
|------------|----------------------------|
| rdg | 478 |
| run | 1 |
| test_prog | Alison8 |
| test_num | 3 |
| test_facil | LaRC AP |
| test_cust | Alison |
| test_zero | Kathy Boyd |
| test_acou | Kathy Boyd |
| test_engr | Ray Casner |
| testbed | NATR full wedge |
| testbed | JER w/ external supplement |

Scenario: Fly-over, full-scale, 1500' sideline, standard day
 Release date: Wed Aug 20 08:08:55 1997
 Release time: 21:59:59

| | |
|------------|------------|
| Data ambis | 14.70 pale |
| Data ambis | 537 0 R |
| Data ambis | 70.00% |
| Data scale | 1 |

| Date (year) | 1801 | 1811 | 1821 | 1831 | 1841 | 1851 | 1861 | 1871 | 1881 | 1891 | 1901 | 1911 | 1921 | 1931 | 1941 | 1951 | 1961 | 1971 | 1981 | 1991 | 2001 | 2011 | 2021 | 2031 | 2041 | 2051 | 2061 | 2071 | 2081 | 2091 | 2101 | 2111 | 2121 | 2131 | 2141 | 2151 | 2161 | 2171 | 2181 | 2191 | 2201 | 2211 | 2221 | 2231 | 2241 | 2251 | 2261 | 2271 | 2281 | 2291 | 2301 | 2311 | 2321 | 2331 | 2341 | 2351 | 2361 | 2371 | 2381 | 2391 | 2401 | 2411 | 2421 | 2431 | 2441 | 2451 | 2461 | 2471 | 2481 | 2491 | 2501 | 2511 | 2521 | 2531 | 2541 | 2551 | 2561 | 2571 | 2581 | 2591 | 2601 | 2611 | 2621 | 2631 | 2641 | 2651 | 2661 | 2671 | 2681 | 2691 | 2701 | 2711 | 2721 | 2731 | 2741 | 2751 | 2761 | 2771 | 2781 | 2791 | 2801 | 2811 | 2821 | 2831 | 2841 | 2851 | 2861 | 2871 | 2881 | 2891 | 2901 | 2911 | 2921 | 2931 | 2941 | 2951 | 2961 | 2971 | 2981 | 2991 | 3001 | 3011 | 3021 | 3031 | 3041 | 3051 | 3061 | 3071 | 3081 | 3091 | 3101 | 3111 | 3121 | 3131 | 3141 | 3151 | 3161 | 3171 | 3181 | 3191 | 3201 | 3211 | 3221 | 3231 | 3241 | 3251 | 3261 | 3271 | 3281 | 3291 | 3301 | 3311 | 3321 | 3331 | 3341 | 3351 | 3361 | 3371 | 3381 | 3391 | 3401 | 3411 | 3421 | 3431 | 3441 | 3451 | 3461 | 3471 | 3481 | 3491 | 3501 | 3511 | 3521 | 3531 | 3541 | 3551 | 3561 | 3571 | 3581 | 3591 | 3601 | 3611 | 3621 | 3631 | 3641 | 3651 | 3661 | 3671 | 3681 | 3691 | 3701 | 3711 | 3721 | 3731 | 3741 | 3751 | 3761 | 3771 | 3781 | 3791 | 3801 | 3811 | 3821 | 3831 | 3841 | 3851 | 3861 | 3871 | 3881 | 3891 | 3901 | 3911 | 3921 | 3931 | 3941 | 3951 | 3961 | 3971 | 3981 | 3991 | 4001 | 4011 | 4021 | 4031 | 4041 | 4051 | 4061 | 4071 | 4081 | 4091 | 4101 | 4111 | 4121 | 4131 | 4141 | 4151 | 4161 | 4171 | 4181 | 4191 | 4201 | 4211 | 4221 | 4231 | 4241 | 4251 | 4261 | 4271 | 4281 | 4291 | 4301 | 4311 | 4321 | 4331 | 4341 | 4351 | 4361 | 4371 | 4381 | 4391 | 4401 | 4411 | 4421 | 4431 | 4441 | 4451 | 4461 | 4471 | 4481 | 4491 | 4501 | 4511 | 4521 | 4531 | 4541 | 4551 | 4561 | 4571 | 4581 | 4591 | 4601 | 4611 | 4621 | 4631 | 4641 | 4651 | 4661 | 4671 | 4681 | 4691 | 4701 | 4711 | 4721 | 4731 | 4741 | 4751 | 4761 | 4771 | 4781 | 4791 | 4801 | 4811 | 4821 | 4831 | 4841 | 4851 | 4861 | 4871 | 4881 | 4891 | 4901 | 4911 | 4921 | 4931 | 4941 | 4951 | 4961 | 4971 | 4981 | 4991 | 5001 | 5011 | 5021 | 5031 | 5041 | 5051 | 5061 | 5071 | 5081 | 5091 | 5101 | 5111 | 5121 | 5131 | 5141 | 5151 | 5161 | 5171 | 5181 | 5191 | 5201 | 5211 | 5221 | 5231 | 5241 | 5251 | 5261 | 5271 | 5281 | 5291 | 5301 | 5311 | 5321 | 5331 | 5341 | 5351 | 5361 | 5371 | 5381 | 5391 | 5401 | 5411 | 5421 | 5431 | 5441 | 5451 | 5461 | 5471 | 5481 | 5491 | 5501 | 5511 | 5521 | 5531 | 5541 | 5551 | 5561 | 5571 | 5581 | 5591 | 5601 | 5611 | 5621 | 5631 | 5641 | 5651 | 5661 | 5671 | 5681 | 5691 | 5701 | 5711 | 5721 | 5731 | 5741 | 5751 | 5761 | 5771 | 5781 | 5791 | 5801 | 5811 | 5821 | 5831 | 5841 | 5851 | 5861 | 5871 | 5881 | 5891 | 5901 | 5911 | 5921 | 5931 | 5941 | 5951 | 5961 | 5971 | 5981 | 5991 | 6001 | 6011 | 6021 | 6031 | 6041 | 6051 | 6061 | 6071 | 6081 | 6091 | 6101 | 6111 | 6121 | 6131 | 6141 | 6151 | 6161 | 6171 | 6181 | 6191 | 6201 | 6211 | 6221 | 6231 | 6241 | 6251 | 6261 | 6271 | 6281 | 6291 | 6301 | 6311 | 6321 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

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150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: B, C, D, F, G, H, J, K, L

412

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[illegible]

Data ambdi 14.30 pada
Data ambdi 536.0 A
Data ambdi 70.00%
Data scale 1

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Machine 18:47:02
 Scenario: Fry-over, full-scale, 1500' sideline, standard day
 Processing date: Wed Aug 20 05:50:50 1997

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|-------------|------------|
| Data ambisi | 14.70 pels |
| Data ambisi | 537.0 R |
| Data ambisi | 70.00% |
| Data escala | 1 |

| Distance, f | 1831.18 | 1732.05 | 1655.07 | 1590.27 | 1532.81 | 1505.73 | 1500 | 1505.73 | 1523.14 | 1552.81 | 1590.27 | 1655.07 | 1732.05 | 1831.18 | 1958.11 | 2121.32 | 2323.98 | 2615.17 | 3000 | 3549.5 | 4305.71 | 5735.55 |
|--------------|---------|---------|---------|---------|---------|---------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------|--------|---------|---------|
| angle | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| of circle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| of frequency | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 100 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 120 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 140 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 160 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 180 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 200 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 250 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 300 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 350 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 400 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 450 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 500 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 550 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 600 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 650 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 700 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 750 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 8000 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 150 | 155 | 160 | 165 |
| 10000 | 55 | 60 | 65 | 70 | 75</ | | | | | | | | | | | | | | | | | |

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| Q6 | 406 | 157.16 | 1720.05 | 1655.07 | 1590.27 | 1552.91 | 1520.14 | 1505.73 | 1500 | 1505.73 | 1520.14 | 1552.91 | 1590.27 | 1655.07 | 1720.05 | 1831.18 | 1958.11 | 2121.32 | 2333.58 | 2615.17 | 3000 | 3549.3 | 4385.71 | 5795.55 |
|------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|---------|
| Distance (km) | 157.16 | 1720.05 | 1655.07 | 1590.27 | 1552.91 | 1520.14 | 1505.73 | 1500 | 1505.73 | 1520.14 | 1552.91 | 1590.27 | 1655.07 | 1720.05 | 1831.18 | 1958.11 | 2121.32 | 2333.58 | 2615.17 | 3000 | 3549.3 | 4385.71 | 5795.55 | |
| Rate angle (deg) | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Frequency (Hz) | 56.7 | 82.04 | 61.17 | 62.12 | 65.91 | 63.58 | 65.08 | 65.49 | 65.08 | 65.49 | 65.91 | 66.32 | 67.47 | 68.33 | 69.44 | 70.86 | 72.47 | 74.31 | 76.46 | 78.92 | 81.76 | 84.98 | 88.58 | |
| Power (dBm) | 80 | 81.48 | 82.78 | 83.79 | 84.95 | 86.12 | 87.36 | 88.64 | 89.99 | 90.54 | 91.05 | 91.56 | 92.07 | 92.58 | 93.09 | 93.60 | 94.11 | 94.62 | 95.13 | 95.64 | 96.15 | 96.66 | 97.17 | |
| Altitude (m) | 130 | 82.51 | 83.47 | 84.14 | 84.84 | 85.38 | 85.88 | 86.34 | 86.77 | 87.19 | 87.60 | 88.01 | 88.42 | 88.83 | 89.24 | 89.65 | 90.06 | 90.47 | 90.88 | 91.29 | 91.70 | 92.11 | 92.52 | |
| Latitude (deg) | 190 | 82.51 | 83.47 | 84.14 | 84.84 | 85.38 | 85.88 | 86.34 | 86.77 | 87.19 | 87.60 | 88.01 | 88.42 | 88.83 | 89.24 | 89.65 | 90.06 | 90.47 | 90.88 | 91.29 | 91.70 | 92.11 | 92.52 | |
| Longitude (deg) | 200 | 82.51 | 83.47 | 84.14 | 84.84 | 85.38 | 85.88 | 86.34 | 86.77 | 87.19 | 87.60 | 88.01 | 88.42 | 88.83 | 89.24 | 89.65 | 90.06 | 90.47 | 90.88 | 91.29 | 91.70 | 92.11 | 92.52 | |
| Speed (km/h) | 250 | 82.51 | 83.47 | 84.14 | 84.84 | 85.38 | 85.88 | 86.34 | 86.77 | 87.19 | 87.60 | 88.01 | 88.42 | 88.83 | 89.24 | 89.65 | 90.06 | 90.47 | 90.88 | 91.29 | 91.70 | 92.11 | 92.52 | |
| Heading (deg) | 300 | 82.51 | 83.47 | 84.14 | 84.84 | 85.38 | 85.88 | 86.34 | 86.77 | 87.19 | 87.60 | 88.01 | 88.42 | 88.83 | 89.24 | 89.65 | 90.06 | 90.47 | 90.88 | 91.29 | 91.70 | 92.11 | 92.52 | |
| Altitude (m) | 400 | 82.51 | 83.47 | 84.14 | 84.84 | 85.38 | 85.88 | 86.34 | 86.77 | 87.19 | 87.60 | 88.01 | 88.42 | 88.83 | 89.24 | 89.65 | 90.06 | 90.47 | 90.88 | 91.29 | 91.70 | 92.11 | 92.52 | |
| Speed (km/h) | 500 | 82.51 | 83.47 | 84.14 | 84.84 | 85.38 | 85.88 | 86.34 | 86.77 | 87.19 | 87.60 | 88.01 | 88.42 | 88.83 | 89.24 | 89.65 | 90.06 | 90.47 | 90.88 | 91.29 | 91.70 | 92.11 | 92.52 | |
| Heading (deg) | 600 | 82.51 | 83.47 | 84.14 | 84.84 | 85.38 | 85.88 | 86.34 | 86.77 | 87.19 | 87.60 | 88.01 | 88.42 | 88.83 | 89.24 | 89.65 | 90.06 | 90.47 | 90.88 | 91.29 | 91.70 | 92.11 | 92.52 | |
| Altitude (m) | 800 | 82.51 | 83.47 | 84.14 | 84.84 | 85.38 | 85.88 | 86.34 | 86.77 | 87.19 | 87.60 | 88.01 | 88.42 | 88.83 | 89.24 | 89.65 | 90.06 | 90.47 | 90.88 | 91.29 | 91.70 | 92.11 | 92.52 | |
| Speed (km/h) | 1000 | 82.51 | 83.47 | 84.14 | 84.84 | 85.38 | 85.88 | 86.34 | 86.77 | 87.19 | 87.60 | 88.01 | 88.42 | 88.83 | 89.24 | 89.65 | 90.06 | 90.47 | 90.88 | 91.29 | 91.70 | 92.11 | 92.52 | |
| Heading (deg) | 1200 | 82.51 | 83.47 | 84.14 | 84.84 | | | | | | | | | | | | | | | | | | | |

Machine 18:19:58
Scenario: Fly-over, full-scale, 1500' altitude, standard day
Processing date: Wed Aug 20 05:48:14 1987

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| Data attribute | 70.00% |
| Data scale | 1 |

| Year | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 | 1938 | 1939 | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 | 2077 | 2078 | 2079 | 2080 | 2081 | 2082 | 2083 | 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 | 2116 | 2117 | 2118 | 2119 | 2120 | 2121 | 2122 | 2123 | 2124 | 2125 | 2126 | 2127 | 2128 | 2129 | 2130 | 2131 | 2132 | 2133 | 2134 | 2135 | 2136 | 2137 | 2138 | 2139 | 2140 | 2141 | 2142 | 2143 | 2144 | 2145 | 2146 | 2147 | 2148 | 2149 | 2150 | 2151 | 2152 | 2153 | 2154 | 2155 | 2156 | 2157 | 2158 | 2159 | 2160 | 2161 | 2162 | 2163 | 2164 | 2165 | 2166 | 2167 | 2168 | 2169 | 2170 | 2171 | 2172 | 2173 | 2174 | 2175 | 2176 | 2177 | 2178 | 2179 | 2180 | 2181 | 2182 | 2183 | 2184 | 2185 | 2186 | 2187 | 2188 | 2189 | 2190 | 2191 | 2192 | 2193 | 2194 | 2195 | 2196 | 2197 | 2198 | 2199 | 2200 | 2201 | 2202 | 2203 | 2204 | 2205 | 2206 | 2207 | 2208 | 2209 | 2210 | 2211 | 2212 | 2213 | 2214 | 2215 | 2216 | 2217 | 2218 | 2219 | 2220 | 2221 | 2222 | 2223 | 2224 | 2225 | 2226 | 2227 | 2228 | 2229 | 2230 | 2231 | 2232 | 2233 | 2234 | 2235 | 2236 | 2237 | 2238 | 2239 | 2240 | 2241 | 2242 | 2243 | 2244 | 2245 | 2246 | 2247 | 2248 | 2249 | 2250 | 2251 | 2252 | 2253 | 2254 | 2255 | 2256 | 2257 | 2258 | 2259 | 2260 | 2261 | 2262 | 2263 | 2264 | 2265 | 2266 | 2267 | 2268 | 2269 | 2270 | 2271 | 2272 | 2273 | 2274 | 2275 | 2276 | 2277 | 2278 | 2279 | 2280 | 2281 | 2282 | 2283 | 2284 | 2285 | 2286 | 2287 | 2288 | 2289 | 2290 | 2291 | 2292 | 2293 | 2294 | 2295 | 2296 | 2297 | 2298 | 2299 | 2300 | 2301 | 2302 | 2303 | 2304 | 2305 | 2306 | 2307 | 2308 | 2309 | 2310 | 2311 | 2312 | 2313 | 2314 | 2315 | 2316 | 2317 | 2318 | 2319 | 2320 | 2321 | 2322 | 2323 | 2324 | 2325 | 2326 | 2327 | 2328 | 2329 | 2330 | 2331 | 2332 | 2333 | 2334 | 2335 | 2336 | 2337 | 2338 | 2339 | 2340 | 2341 | 2342 | 2343 | 2344 | 2345 | 2346 | 2347 | 2348 | 2349 | 2350 | 2351 | 2352 | 2353 | 2354 | 2355 | 2356 | 2357 | 2358 | 2359 | 2360 | 2361 | 2362 | 2363 | 2364 | 2365 | 2366 | 2367 | 2368 | 2369 | 2370 | 2371 | 2372 | 2373 | 2374 | 2375 | 2376 | 2377 | 2378 | 2379 | 2380 | 2381 | 2382 | 23 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|

| | |
|------------|---------------------------|
| rog | 450 |
| run | 1 |
| test_prog | Alison98 |
| test_num | 3 |
| test_facil | Leftc APL |
| test_cust | Alison |
| test_sero | Kathy Boyd |
| test_000 | Kathy Boyd |
| test_engr | Ray Castner |
| testid | NATR full wedge |
| testid | JER w external supplement |

[illegible]

| | |
|------------|------------|
| Data ambh | 14.30 pela |
| Data ambh | 538.0 R |
| Data ambh | 70.00% |
| Data ozale | 1 |

| distance (°) | view angle | rot angle (°) | frequency |
|--------------|------------|---------------|-----------|
| 150 | 55 | 0 | 0 |
| 55 | 0 | 0 | 62.64 |
| 0 | 0 | 0 | 61.36 |
| 55 | 55 | 0 | 68.28 |
| 0 | 55 | 0 | 68.97 |
| 0 | 0 | 80 | 70.7 |
| 100 | 0 | 0 | 71.22 |
| 130 | 130 | 0 | 71.97 |
| 160 | 160 | 0 | 71.97 |
| 200 | 200 | 0 | 71.97 |
| 230 | 230 | 0 | 71.97 |
| 260 | 260 | 0 | 71.97 |
| 300 | 300 | 0 | 71.97 |
| 400 | 400 | 0 | 71.97 |
| 500 | 500 | 0 | 71.97 |
| 600 | 600 | 0 | 71.97 |
| 700 | 700 | 0 | 71.97 |
| 800 | 800 | 0 | 71.97 |
| 900 | 900 | 0 | 71.97 |
| 1000 | 1000 | 0 | 71.97 |
| 1300 | 1300 | 0 | 71.97 |
| 1600 | 1600 | 0 | 71.97 |
| 2000 | 2000 | 0 | 71.97 |
| 2500 | 2500 | 0 | 71.97 |
| 3200 | 3200 | 0 | 71.97 |
| 4000 | 4000 | 0 | 71.97 |
| 5000 | 5000 | 0 | 71.97 |
| 6300 | 6300 | 0 | 71.97 |
| 8000 | 8000 | 0 | 71.97 |
| 10000 | 10000 | 0 | 71.97 |
| CAUSE | CAUSE | CAUSE | CAUSE |

[illegible]

| Date | | Time | | Location | | Observer | | Weather | | Tide | | Wind | | Temp | | Humidity | | Pressure | | Clouds | | Visibility | | Remarks | |
|-------|------|-------|------|----------|------|----------|------|---------|------|-------|------|-------|------|-------|------|----------|------|----------|------|--------|------|------------|------|---------|------|
| Start | End | Start | End | Start | End | Start | End | Start | End | Start | End | Start | End | Start | End | Start | End | Start | End | Start | End | Start | End | Start | End |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 2000 | 2005 |
| 1800 | | | | | | | | | | | | | | | | | | | | | | | | | |

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|------------|------------|
| Data ambia | 14.30 psla |
| Data ambia | 536.0 R |
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| distance, t | year angle | not angle | frequency |
|---------------|------------|-----------|-----------|
| 150 | 55 | 5 | 68.33 |
| 55 | 0 | 0 | 70.78 |
| 5 | 0 | 0 | 71.35 |
| 0 | 0 | 0 | 72.34 |
| | | | 73.41 |
| | | | 74.83 |
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| | | | 75.46 |
| | | | 76.56 |
| | | | 78.71 |
| | | | 78.66 |
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| | | | 78.28 |
| | | | 78.75 |
| | | | 78.06 |
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429

| | |
|------------|------------|
| Data ambis | 14.70 pais |
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| Data scale | 1 |

75%L, 20DH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL

1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL

Operating Conditions: B, C, D, F, G, H, J, K, L

431

| Distance (ft) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 | 170 | 175 | 180 | 185 | 190 | 195 | 200 | 205 | 210 | 215 | 220 | 225 | 230 | 235 | 240 | 245 | 250 | 255 | 260 | 265 | 270 | 275 | 280 | 285 | 290 | 295 | 300 | 305 | 310 | 315 | 320 | 325 | 330 | 335 | 340 | 345 | 350 | 355 | 360 | 365 | 370 | 375 | 380 | 385 | 390 | 395 | 400 | 405 | 410 | 415 | 420 | 425 | 430 | 435 | 440 | 445 | 450 | 455 | 460 | 465 | 470 | 475 | 480 | 485 | 490 | 495 | 500 | 505 | 510 | 515 | 520 | 525 | 530 | 535 | 540 | 545 | 550 | 555 | 560 | 565 | 570 | 575 | 580 | 585 | 590 | 595 | 600 | 605 | 610 | 615 | 620 | 625 | 630 | 635 | 640 | 645 | 650 | 655 | 660 | 665 | 670 | 675 | 680 | 685 | 690 | 695 | 700 | 705 | 710 | 715 | 720 | 725 | 730 | 735 | 740 | 745 | 750 | 755 | 760 | 765 | 770 | 775 | 780 | 785 | 790 | 795 | 800 | 805 | 810 | 815 | 820 | 825 | 830 | 835 | 840 | 845 | 850 | 855 | 860 | 865 | 870 | 875 | 880 | 885 | 890 | 895 | 900 | 905 | 910 | 915 | 920 | 925 | 930 | 935 | 940 | 945 | 950 | 955 | 960 | 965 | 970 | 975 | 980 | 985 | 990 | 995 | 1000 | 1005 | 1010 | 1015 | 1020 | 1025 | 1030 | 1035 | 1040 | 1045 | 1050 | 1055 | 1060 | 1065 | 1070 | 1075 | 1080 | 1085 | 1090 | 1095 | 1100 | 1105 | 1110 | 1115 | 1120 | 1125 | 1130 | 1135 | 1140 | 1145 | 1150 | 1155 | 1160 | 1165 | 1170 | 1175 | 1180 | 1185 | 1190 | 1195 | 1200 | 1205 | 1210 | 1215 | 1220 | 1225 | 1230 | 1235 | 1240 | 1245 | 1250 | 1255 | 1260 | 1265 | 1270 | 1275 | 1280 | 1285 | 1290 | 1295 | 1300 | 1305 | 1310 | 1315 | 1320 | 1325 | 1330 | 1335 | 1340 | 1345 | 1350 | 1355 | 1360 | 1365 | 1370 | 1375 | 1380 | 1385 | 1390 | 1395 | 1400 | 1405 | 1410 | 1415 | 1420 | 1425 | 1430 | 1435 | 1440 | 1445 | 1450 | 1455 | 1460 | 1465 | 1470 | 1475 | 1480 | 1485 | 1490 | 1495 | 1500 | 1505 | 1510 | 1515 | 1520 | 1525 | 1530 | 1535 | 1540 | 1545 | 1550 | 1555 | 1560 | 1565 | 1570 | 1575 | 1580 | 1585 | 1590 | 1595 | 1600 | 1605 | 1610 | 1615 | 1620 | 1625 | 1630 | 1635 | 1640 | 1645 | 1650 | 1655 | 1660 | 1665 | 1670 | 1675 | 1680 | 1685 | 1690 | 1695 | 1700 | 1705 | 1710 | 1715 | 1720 | 1725 | 1730 | 1735 | 1740 | 1745 | 1750 | 1755 | 1760 | 1765 | 1770 | 1775 | 1780 | 1785 | 1790 | 1795 | 1800 | 1805 | 1810 | 1815 | 1820 | 1825 | 1830 | 1835 | 1840 | 1845 | 1850 | 1855 | 1860 | 1865 | 1870 | 1875 | 1880 | 1885 | 1890 | 1895 | 1900 | 1905 | 1910 | 1915 | 1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 | 2055 | 2060 | 2065 | 2070 | 2075 | 2080 | 2085 | 2090 | 2095 | 2100 | 2105 | 2110 | 2115 | 2120 | 2125 | 2130 | 2135 | 2140 | 2145 | 2150 | 2155 | 2160 | 2165 | 2170 | 2175 | 2180 | 2185 | 2190 | 2195 | 2200 | 2205 | 2210 | 2215 | 2220 | 2225 | 2230 | 2235 | 2240 | 2245 | 2250 | 2255 | 2260 | 2265 | 2270 | 2275 | 2280 | 2285 | 2290 | 2295 | 2300 | 2305 | 2310 | 2315 | 2320 | 2325 | 2330 | 2335 | 2340 | 2345 | 2350 | 2355 | 2360 | 2365 | 2370 | 2375 | 2380 | 2385 | 2390 | 2395 | 2400 | 2405 | 2410 | 2415 | 2420 | 2425 |
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| 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 |
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| | |
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| 100000 | 67.84 |
| 100000 | 67.84 |

04.27
04.27

run 453
 test_prog Allcon06
 test_num 3
 test_facd Lufth APL
 test_cusr Allison
 test_sero Kathy Boyd
 test_acord Kathy Boyd
 test_engr Eric Cramer
 notes MATR full wedge
 rigid JER w/ external supplement
 mabld DP20
 nozblld SHCS
 anoz 41.226
 amisc 35.02
 amro 78.39
 scale 815.47
 ref 0.119948
 parrb 14.1542
 lenb 406.023
 rhumb 58.61
 windb1 0
 rnc 1.383
 rpb 1.44
 ptc 19.7108
 pbb 20.382
 wldc 2.416
 wldc 13.595
 wldc 1179.58
 wldc 500.019
 pmtz 20.2789
 mtr 807.885
 magnd 0.674805
 gravap 13120.1
 batchn [85]
 bgrd 05 Dec 86
 ancdat 05 Dec 86
 ancdat 15 Dec 86
 ancdat 07 Dec 86
 OASDate 15 Dec 86
 OASDate 05 Dec 86
 bldtime 15 Dec 86
 bldtime 15 Dec 86

--Scenario: Fly-over, full-scale, 1500' altitude, standard day
 Processing date: Mon Aug 18 11:31:28 1997

Data array 14.70 pss

Data array 337.0 Hz

Data array 70.0 Hz

Data array 1

distance (

roll angle (

frequency

year angle

roll angle (

frequency

year angle

roll angle (

frequency

year angle

roll angle (

frequency

year angle

roll angle (

frequency

year angle

roll angle (

frequency

year angle

roll angle (

frequency

year angle

roll angle (

| | |
|----------|----------------------------|
| dog | 452 |
| run | 1 |
| stun | AlisonB |
| test_num | 1 |
| test | LPRC uPL |
| test_col | Alison |
| test_row | Kathy Boyd |
| test_col | Alison |
| test_row | Kathy Boyd |
| test_col | Alison |
| test_row | Ray Casner |
| test_col | NATR kill wedge |
| test_row | JER w/ external supplement |
| test_col | DP20 |
| test_row | SH25 |
| test_col | 41,228 |
| test_row | 35,02 |
| test_col | 78,39 |
| test_row | 4 |
| test_col | 922,38 |
| test_row | 0.2008 |
| test_col | 14,168 |
| test_row | 498,787 |
| test_col | 58,8 |
| test_row | 0 |
| test_col | 1,542 |
| test_row | 1,811 |
| test_col | 21,8424 |
| test_row | 22,1898 |
| test_col | 2,703 |
| test_row | 17,004 |
| test_col | 11,635 |
| test_row | 52,236 |
| test_col | 28,789 |
| test_row | 619,282 |
| test_col | 0,755683 |
| test_row | 17287,8 |
| test_col | [28] |
| test_row | bg49 |
| test_col | 05 Dec 96 |
| test_row | ecoline |
| test_col | 15,1006 |
| test_row | DAOSkate 05 Dec 96 |
| test_col | 15,1006 |
| test_row | DAOSkate 05 Dec 96 |
| test_col | 15,1006 |
| test_row | DAOSkate 05 Dec 96 |
| test_col | 15,1006 |

Scenario: 150 foot arc; 77F, 70%; Full scale; Third-octave SPL
Processing date: Wed Aug 20 05:28:07 1997
bchenna 15:16:06

Data ambir 14.30 pers
Data ambir 536.0 R
Data ambir 70.00%
Data scale 1

[illegible]

| tag | 450 |
|-----------|----------|
| un | 1 |
| rest_prog | Alloues |
| rest | 3 |
| rest_2 | 3 |
| rest_3 | LeRC APL |
| rest_4 | LeRC APL |
| rest_5 | LeRC APL |
| rest_6 | LeRC APL |
| rest_7 | LeRC APL |
| rest_8 | LeRC APL |
| rest_9 | LeRC APL |
| rest_10 | LeRC APL |
| rest_11 | LeRC APL |
| rest_12 | LeRC APL |
| rest_13 | LeRC APL |
| rest_14 | LeRC APL |
| rest_15 | LeRC APL |
| rest_16 | LeRC APL |
| rest_17 | LeRC APL |
| rest_18 | LeRC APL |
| rest_19 | LeRC APL |
| rest_20 | LeRC APL |
| rest_21 | LeRC APL |
| rest_22 | LeRC APL |
| rest_23 | LeRC APL |
| rest_24 | LeRC APL |
| rest_25 | LeRC APL |
| rest_26 | LeRC APL |
| rest_27 | LeRC APL |
| rest_28 | LeRC APL |
| rest_29 | LeRC APL |
| rest_30 | LeRC APL |
| rest_31 | LeRC APL |
| rest_32 | LeRC APL |
| rest_33 | LeRC APL |
| rest_34 | LeRC APL |
| rest_35 | LeRC APL |
| rest_36 | LeRC APL |
| rest_37 | LeRC APL |
| rest_38 | LeRC APL |
| rest_39 | LeRC APL |
| rest_40 | LeRC APL |
| rest_41 | LeRC APL |
| rest_42 | LeRC APL |
| rest_43 | LeRC APL |
| rest_44 | LeRC APL |
| rest_45 | LeRC APL |
| rest_46 | LeRC APL |
| rest_47 | LeRC APL |
| rest_48 | LeRC APL |
| rest_49 | LeRC APL |
| rest_50 | LeRC APL |
| rest_51 | LeRC APL |
| rest_52 | LeRC APL |
| rest_53 | LeRC APL |
| rest_54 | LeRC APL |
| rest_55 | LeRC APL |
| rest_56 | LeRC APL |
| rest_57 | LeRC APL |
| rest_58 | LeRC APL |
| rest_59 | LeRC APL |
| rest_60 | LeRC APL |
| rest_61 | LeRC APL |
| rest_62 | LeRC APL |
| rest_63 | LeRC APL |
| rest_64 | LeRC APL |
| rest_65 | LeRC APL |
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| rest_69 | LeRC APL |
| rest_70 | LeRC APL |
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| rest_72 | LeRC APL |
| rest_73 | LeRC APL |
| rest_74 | LeRC APL |
| rest_75 | LeRC APL |
| rest_76 | LeRC APL |
| rest_77 | LeRC APL |
| rest_78 | LeRC APL |
| rest_79 | LeRC APL |
| rest_80 | LeRC APL |
| rest_81 | LeRC APL |
| rest_82 | LeRC APL |
| rest_83 | LeRC APL |
| rest_84 | LeRC APL |
| rest_85 | LeRC APL |
| rest_86 | LeRC APL |
| rest_87 | LeRC APL |
| rest_88 | LeRC APL |
| rest_89 | LeRC APL |
| rest_90 | LeRC APL |
| rest_91 | LeRC APL |
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| rest_93 | LeRC APL |
| rest_94 | LeRC APL |
| rest_95 | LeRC APL |
| rest_96 | LeRC APL |
| rest_97 | LeRC APL |
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| rest_102 | LeRC APL |
| rest_103 | LeRC APL |
| rest_104 | LeRC APL |
| rest_105 | LeRC APL |
| rest_106 | LeRC APL |
| rest_107 | LeRC APL |
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| rest_109 | LeRC APL |
| rest_110 | LeRC APL |
| rest_111 | LeRC APL |
| rest_112 | LeRC APL |
| rest_113 | LeRC APL |
| rest_114 | LeRC APL |
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| rest_116 | LeRC APL |
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| rest_118 | LeRC APL |
| rest_119 | LeRC APL |
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| rest_121 | LeRC APL |
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| rest_123 | LeRC APL |
| rest_124 | LeRC APL |
| rest_125 | LeRC APL |
| rest_126 | LeRC APL |
| rest_127 | LeRC APL |
| rest_128 | LeRC APL |
| rest_129 | LeRC APL |
| rest_130 | LeRC APL |
| rest_131 | LeRC APL |
| rest_132 | LeRC APL |
| rest_133 | LeRC APL |
| rest_134 | LeRC APL |
| rest_135 | LeRC APL |
| rest_136 | LeRC APL |
| rest_137 | LeRC APL |
| rest_138 | LeRC APL |
| rest_139 | LeRC APL |
| rest_140 | LeRC APL |
| rest_141 | LeRC APL |
| rest_142 | LeRC APL |
| rest_143 | LeRC APL |
| rest_144 | LeRC APL |
| rest_145 | LeRC APL |
| rest_146 | LeRC APL |
| rest_147 | LeRC APL |
| rest_148 | LeRC APL |
| rest_149 | LeRC APL |
| rest_150 | LeRC APL |
| rest_151 | LeRC APL |
| rest_152 | LeRC APL |
| rest_153 | LeRC APL |
| rest_154 | LeRC APL |
| rest_155 | LeRC APL |
| rest_156 | LeRC APL |
| rest_157 | LeRC APL |
| rest_158 | LeRC APL |
| rest_159 | LeRC APL |
| rest_160 | LeRC APL |
| rest_161 | LeRC APL |
| rest_162 | LeRC APL |
| rest_163 | LeRC APL |
| rest_164 | LeRC APL |
| rest_165 | LeRC APL |
| rest_166 | |

Date ambt 14.30 psia
Data ambt 536.0 A
Data ambt 70.00%
Data scale 1

[illegible]

442

[illegible]

[illegible][illegible]

NASA/CR—2002-210823/VOL2

445

Data embk 14.30 psia
 Data embk 538.0 ft
 Data embk 70.00%
 Data scale 1

distance: (1) 150 150

frequency

| | |
|-----|-------|
| 100 | 71.4 |
| 130 | 71.24 |

| | |
|-----|-------|
| 200 | 71 94 |
|-----|-------|

| | |
|-----|-------|
| 320 | 74.0 |
| 400 | 73.69 |

| | |
|-----|-------|
| 630 | 74.78 |
| 800 | 78.13 |

1300 7676

| | |
|------|-------|
| 2000 | 76.04 |
| 2500 | 75.78 |

| | |
|------|-------|
| 4000 | 75.48 |
| 5000 | 74.37 |

8000 73,64

1000

446

Data embri 14.70 pais
Data embri 537.0 R
Data embri 70.00%
Data scale 1

| Distance (h) | 1831.16 | 1702.05 | 1655.07 | 1596.27 | 1550.81 | 1523.14 | 1506.73 | 1500 | 1506.73 | 1523.14 | 1550.81 | 1596.27 | 1655.07 | 1702.05 | 1831.16 |
|----------------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|---------|---------|
| Year angle (°) | 56 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 131.16 |
| Frequency (Hz) | 48.29 | 47.81 | 48.29 | 50.59 | 51.13 | 48.51 | 51.87 | 52.57 | 53.68 | 53.04 | 53.72 | 52.3 | 53.07 | 53.52 | 53.72 |
| 1 | 80 | 47.5 | 48.85 | 50.74 | 51.58 | 50.78 | 51.07 | 52.56 | 51.06 | 50.8 | 52.9 | 51.74 | 51.86 | 52.73 | 52.84 |
| 2 | 100 | 48.86 | 50.04 | 50.77 | 51.04 | 48.73 | 50.96 | 51.88 | 51.15 | 52.48 | 51.42 | 54.78 | 54.89 | 55.82 | 54.04 |
| 3 | 120 | 48.27 | 48.81 | 52.75 | 53.36 | 53.8 | 54.26 | 52.85 | 54.86 | 54.87 | 54.45 | 56.11 | 56.11 | 55.24 | 55.45 |
| 4 | 180 | 49.71 | 52.3 | 53.58 | 53.64 | 54.61 | 54.61 | 54.61 | 54.61 | 54.61 | 54.61 | 57.49 | 57.5 | 58.26 | 57.49 |
| 5 | 200 | 52.47 | 54.08 | 55.22 | 53.71 | 54.68 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 6 | 250 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 7 | 300 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 8 | 400 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 9 | 500 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 10 | 600 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 11 | 700 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 12 | 800 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 13 | 900 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 14 | 1000 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 15 | 1100 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 16 | 1200 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 17 | 1300 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 18 | 1400 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 19 | 1500 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 20 | 1600 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 21 | 1700 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 22 | 1800 | 52.16 | 53.72 | 54.46 | 54.68 | 54.61 | 54.61 | 55.03 | 55.03 | 55.03 | 55.03 | 58.26 | 58.26 | 58.26 | 58.26 |
| 23 | 1900 | 52.16 | 53.72 | 54.46 | 54.68 | 5 | | | | | | | | | |

447

Data ambient 14.30 psia
Data ambient 536.0 R
Data ambient 70.00%
Data scale 1

Data ambient 14.30 psia
Data ambient 536.0 R
Data ambient 70.00%
Data scale 1

| Data source | 70.00% |
|-------------|--------|
| Data source | 70.00% |
| Data source | 70.00% |

150

you are
55

| roll angle (°) | frequency |
|----------------|-----------|
| 0 | 55 |

| | |
|-----|-------|
| 80 | 73.50 |
| 100 | 74.9 |

| | |
|-----|-------|
| 128 | 76.11 |
| 130 | 76.11 |

| | |
|-----|-------|
| 160 | 75.12 |
| 200 | 70.19 |

| | |
|-----|-------|
| 250 | 77.77 |
| 230 | 77.93 |

| | |
|-----|------|
| 320 | 79.1 |
| 400 | 79.1 |

| | |
|-----|-------|
| 500 | 70.89 |
| 630 | 79.43 |

| | |
|-------|-------|
| 800 | 79.78 |
| 1,000 | 81.18 |

| | |
|------|-------|
| 1000 | 91.10 |
| 1300 | 82.14 |

| | |
|------|-------|
| 1600 | 62.02 |
| 2000 | 61.47 |

| | |
|------|-------|
| 2500 | 90.68 |
| 2200 | 90.38 |

3200 70.19

| | |
|------|-------|
| 5000 | 78.10 |
| 6300 | 77.41 |

| | |
|-------|-------|
| 8000 | 78.61 |
| 10000 | 75.13 |

92.45

[illegible]

50%L, 12CL

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

[illegible]

[illegible]

463

| Data scale | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | |
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bichrome 16:50:28
 --Scenario: Fly-over, full-scale, 1500' sideline, standard day
 Wed Aug 27 10:20:54 1997
 Processing date:

| | |
|------------|------------|
| Data ambis | 14.70 peis |
| Data ambis | 537.0 R |
| Data ambis | 70.00% |
| Data scale | 1 |

| distance (km) | 1831.16 | 1732.05 | 1685.07 | 1588.27 | 1552.81 | 1523.14 | 1506.73 | 1500.73 | 1505.73 | 1523.14 | 1552.81 | 1596.27 | 1655.07 | 1732.05 | 1831.16 | 2121.32 | 2303.58 | 2615.17 | 3000.15 | 3548.3 | 4395.71 | 5795.55 |
|----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|
| roll angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| frequency | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 |
| 100 | 55.78 | 59.52 | 59.16 | 58.63 | 58.85 | 58.82 | 59.21 | 57.81 | 57.00 | 56.78 | 56.93 | 56.51 | 56.21 | 56.32 | 56.81 | 56.41 | 56.48 | 56.25 | 56.58 | 56.96 | 57.42 | 57.89 |
| 110 | 56.19 | 57.35 | 56.88 | 56.54 | 56.58 | 56.82 | 56.81 | 56.78 | 56.41 | 56.19 | 56.24 | 56.13 | 56.01 | 56.21 | 56.41 | 56.34 | 56.38 | 56.19 | 56.32 | 56.58 | 56.94 | 57.42 |
| 120 | 56.58 | 57.54 | 57.05 | 56.78 | 56.82 | 57.04 | 56.81 | 56.78 | 56.41 | 56.19 | 56.24 | 56.13 | 56.01 | 56.21 | 56.41 | 56.34 | 56.38 | 56.19 | 56.32 | 56.58 | 56.94 | 57.42 |
| 130 | 56.97 | 57.89 | 57.38 | 57.14 | 57.18 | 57.38 | 57.14 | 57.11 | 56.74 | 56.52 | 56.57 | 56.46 | 56.34 | 56.54 | 56.74 | 56.67 | 56.62 | 56.43 | 56.57 | 56.83 | 57.19 | 57.67 |
| 140 | 57.32 | 58.22 | 57.61 | 57.41 | 57.45 | 57.61 | 57.38 | 57.35 | 56.98 | 56.76 | 56.81 | 56.70 | 56.58 | 56.78 | 56.98 | 56.91 | 56.86 | 56.67 | 56.81 | 57.07 | 57.43 | 57.91 |
| 150 | 57.62 | 58.52 | 57.91 | 57.71 | 57.75 | 57.91 | 57.68 | 57.65 | 57.28 | 57.06 | 57.11 | 57.00 | 56.88 | 57.08 | 57.28 | 57.21 | 57.16 | 56.97 | 57.11 | 57.37 | 57.73 | 58.21 |
| 160 | 57.92 | 58.82 | 58.21 | 58.01 | 58.05 | 58.21 | 57.98 | 57.95 | 57.58 | 57.36 | 57.41 | 57.30 | 57.18 | 57.38 | 57.58 | 57.51 | 57.46 | 57.27 | 57.41 | 57.67 | 58.03 | 58.51 |
| 170 | 58.22 | 59.12 | 58.51 | 58.31 | 58.35 | 58.51 | 58.28 | 58.25 | 57.88 | 57.66 | 57.71 | 57.60 | 57.48 | 57.68 | 57.88 | 57.81 | 57.76 | 57.57 | 57.71 | 57.97 | 58.33 | 58.81 |
| 180 | 58.52 | 59.42 | 58.81 | 58.61 | 58.65 | 58.81 | 58.58 | 58.55 | 58.18 | 57.96 | 58.01 | 57.90 | 57.78 | 57.98 | 58.18 | 58.11 | 58.06 | 57.87 | 58.01 | 58.27 | 58.63 | 59.11 |
| 190 | 58.82 | 59.72 | 59.11 | 58.91 | 58.95 | 59.11 | 58.88 | 58.85 | 58.48 | 58.26 | 58.31 | 58.20 | 58.08 | 58.28 | 58.48 | 58.41 | 58.36 | 58.17 | 58.31 | 58.57 | 58.93 | 59.41 |
| 200 | 59.12 | 60.02 | 59.41 | 59.21 | 59.25 | 59.41 | 59.18 | 59.15 | 58.78 | 58.56 | 58.61 | 58.50 | 58.38 | 58.58 | 58.78 | 58.71 | 58.66 | 58.47 | 58.61 | 58.87 | 59.23 | 59.71 |
| 210 | 59.42 | 60.32 | 59.71 | 59.51 | 59.55 | 59.71 | 59.48 | 59.45 | 59.08 | 58.86 | 58.91 | 58.80 | 58.68 | 58.88 | 59.08 | 59.01 | 58.96 | 58.77 | 58.91 | 59.17 | 59.53 | 60.01 |
| 220 | 59.72 | 60.62 | 60.01 | 59.81 | 59.85 | 60.01 | 59.78 | 59.75 | 59.38 | 59.16 | 59.21 | 59.10 | 58.98 | 59.18 | 59.38 | 59.31 | 59.26 | 59.07 | 59.21 | 59.47 | 59.83 | 60.31 |
| 230 | 60.02 | 60.92 | 60.31 | 60.11 | 60.15 | 60.31 | 60.08 | 60.05 | 59.68 | 59.46 | 59.51 | 59.40 | 59.28 | 59.48 | 59.68 | 59.61 | 59.56 | 59.37 | 59.51 | 59.77 | 60.13 | 60.61 |
| 240 | 60.32 | 61.22 | 60.61 | 60.41 | 60.45 | 60.61 | 60.38 | 60.35 | 59.98 | 59.76 | 59.81 | 59.70 | 59.58 | 59.78 | 59.98 | 59. | | | | | | |

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| 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

Data number 14.30 pada
Data number 578.18

| | |
|------------|---------|
| Data array | 300.00% |
| Data array | 70.00% |
| Data array | 1 |

150

| Yaw angle | Roll angle |
|-----------|------------|
| 55 | 0 |

| frequency | 0 | 55 |
|-----------|---|----|
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| | |
|-----|-------|
| 100 | 0 |
| 130 | 88.92 |

| | |
|-----|-------|
| 180 | 67.62 |
| 200 | 67.53 |

| | |
|-----|-------|
| 250 | 70.2 |
| 320 | 71.12 |
| 330 | 70.54 |

| | |
|-----|-------|
| 400 | 70.64 |
| 500 | 70.42 |
| 420 | 69.1 |

| | |
|------|-------|
| 830 | 69.1 |
| 800 | 70.05 |
| .000 | 89.13 |

| | |
|------|-------|
| 1000 | 69.13 |
| 1300 | 69.04 |
| 1600 | 68.92 |

| | |
|------|-------|
| 1000 | 68.80 |
| 2000 | 68.80 |
| 2500 | 68.80 |

| | |
|------|-------|
| 3200 | 69,08 |
| 4000 | 69,39 |

| | |
|------|-------|
| 5000 | 69.83 |
| 6300 | 70.85 |

| | |
|-------|-------|
| 8000 | 71.14 |
| 10000 | 70.99 |

04SP1 82.05

| run | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787</ |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|

472

[illegible][illegible]

50%L, 12UH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

| | | |
|----------------------------|-----------------|--|
| ndg | 214 | |
| run | 1 | |
| test_prog | Allison96 | |
| test_num | 3 | |
| test_fack | LeRC APL | |
| test_cust | Allison | |
| lead_senr | Kathy Boyd | |
| lead_sccu | Kathy Boyd | |
| lead_engr | Ray Cashner | |
| NATR | NATR full wedge | |
| JER w/ external supplement | | |
| nobid | | |

[illegible]

Daya sembah 14.30 pela

Dado: ambien 538.0 A

| Data variable | 70.00% | 1 |
|---------------|--------|---|
| Data scale | | |

ANALYSIS

distance: (i)

open and
new angle

| Frequency | Actual frequency |
|-----------|------------------|
| 55 | 55 |

71.12

| | |
|-----|-------|
| 100 | 72.11 |
| 130 | 79.87 |

130 74.9

| | |
|-----|-------|
| 200 | 75.86 |
|-----|-------|

| | |
|-----|-------|
| 250 | 76.49 |
| 300 | 77.93 |

320 77.82

400 79.92

500 77.31

| | |
|-----|-------|
| 630 | 70.06 |
| 630 | 77.59 |

800 77.73
1000 77.53

1300 77.24

| | |
|------|-------|
| 1600 | 72.81 |
| 2000 | 72.1 |

2000 76.1
2500 75.01

3200 73.00

| | |
|------|-------|
| 4000 | 72.76 |
| 5000 | 71.93 |

5000 71.22
5300 69.47

8000 64.37

| | 01/08/20 | 05.08 |
|----------|----------|----------|
| 100000 | 100000 | 100000 |
| 01/08/20 | 01/08/20 | 01/08/20 |

UNCLASSIFIED

[illegible]

Days sample 14 30 60 90

Delta ambok 536.0 A

70.000%

Data scale

Distance: 6

55

roll angle (°)

frequency

80 76.71

| | |
|-----|-------|
| 100 | 76.98 |
| 130 | 77.67 |

100 78.95

200 79.33

250 79.24

| | |
|-----|-------|
| 320 | 79.43 |
| 188 | 79.34 |

| | |
|-----|-------|
| 400 | 78.38 |
| 500 | 80.28 |

80.53 830

800 81.38

1000 01.9

| | |
|------|-------|
| 1300 | 82.63 |
| 1800 | 82.74 |

1600 02.74
2000 03.24

2600 02.57

3200 02.30

| | |
|------|-------|
| 4000 | 51.01 |
| 5000 | 50.08 |

| | |
|------|--------|
| 5000 | \$0.00 |
| 6300 | \$0.07 |

8000 79.53

10000 77.94

OASPL 84.1

480

Data ambient 14.70 psi
Data ambient 537.0 R
Data ambient 70.00%
Data scale 1

[illegible]

Data ambre 14.30 peas
Data ambre 536.0 A
Data ambre 70.00%
Data scale 1

distance: f 150

| roll angle (°) | yaw angle (°) |
|----------------|---------------|
| 0 | 55 |

| frequency | 55 | 0 | 0 |
|-----------|----|---|---|
| 80 | | | |
| 100 | | | |

| | |
|-----|-------|
| 100 | 78.50 |
| 130 | 98.56 |
| 160 | |

| | |
|-----|-------|
| 200 | 65.11 |
| 250 | 63.45 |

| | |
|-----|-------|
| 320 | 64.31 |
| 400 | 63.86 |

| | |
|-----|-------|
| 500 | 64 |
| 630 | 64.34 |
| 750 | 64.68 |

| | |
|------|-------|
| 800 | 85.3 |
| 1000 | 84.53 |
| 1200 | 83.12 |

| | |
|------|-------|
| 1300 | 63.12 |
| 1500 | 61.96 |
| 2000 | 60.7 |

| | |
|------|-------|
| 2500 | 59.76 |
| 3200 | 58.82 |

| | |
|------|-------|
| 4000 | 57.89 |
| 5000 | 58.0 |

| | |
|-------|-------|
| 6300 | 57.4 |
| 5000 | 63.48 |
| 1,000 | 59.1 |

10000 98.92
OASPL 98.92

| | |
|-------------|----------------------------|
| sq | 220 |
| un | 1 |
| Alison_prog | Alison86 |
| test_num | 3 |
| test_facd | LeRC API |
| test_cust | Alison |
| read_aero | Kathy Boyd |
| read_aero | Kathy Boyd |
| read_engr | Ray Casner |
| read_natr | NATR hull wedge |
| read_jer | JER w/ external supplement |

bedtime 19:35:40
Scenario: Fly-over, full-scale, 1500' sideline, standard day
 Processing date: Wed Aug 20 00:39:21 1997

Data ambles 14.70 psia
Data ambles 537.0 ft
Data ambles 70.00%
Data scale 1

| | distance (| 1831.16 | 1732.05 | 1655.07 | 1598.27 | 1552.91 | 1523.14 | 1506.73 | 1500 | 1505.73 | 1523.14 | 1552.91 | 1598.27 | 1655.07 | 1732.05 | 1831.16 | 1958.11 | 2121.32 | 2303.58 | 2615.17 | 3000 | 3548.73 | 4386.71 | 5795.65 |
|------------|------------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|
| year angle | ° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| rad | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| frequency | | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | |
| QASPL | | 83.16 | 54.29 | 58.18 | 57.08 | 58.08 | 56.38 | 59.03 | 58.88 | 60.21 | 60.59 | 61.07 | 61.67 | 62.35 | 63.08 | 63.86 | 64.65 | 65.41 | 66.16 | 66.91 | 67.67 | 68.43 | 69.19 | |
| PWL | | 80.45 | 51.41 | 55.03 | 53.97 | 54.96 | 53.26 | 55.91 | 55.76 | 57.09 | 57.46 | 57.93 | 58.53 | 59.20 | 59.93 | 60.70 | 61.48 | 62.25 | 63.01 | 63.77 | 64.53 | 65.29 | 66.05 | |

PM 60.45

485

| Data inside 14.30 pass | | Data inside 55.00 pass | | Data inside 70.00% pass | | Data inside 85.00% pass | | Data inside 95.00% pass | | Data inside 99.00% pass | | Data inside 99.99% pass | | Data inside 100.00% pass | |
|------------------------|-----|------------------------|-------|-------------------------|-----|-------------------------|-----|-------------------------|-----|-------------------------|-----|-------------------------|-----|--------------------------|-----|
| 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 |
| 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 |
| 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 |
| 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 |
| 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 |
| 145 | 145 | 145 | 145 | 145 | 145 | 145 | 145 | 145 | 145 | 145 | 145 | 145 | 145 | 145 | 145 |
| 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 |
| 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 |
| 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 |
| 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 |
| 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 |
| 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 |
| 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 |
| 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 |
| 195 | 195 | 195 | 195 | 195 | 195 | 195 | 195 | 195 | 195 | 195 | 195 | 195 | 195 | 195 | 195 |
| 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 205 | 205 | 205 | 205 | 205 | 205 | 205 | 205 | 205 | 205 | 205 | 205 | 205 | 205 | 205 | 205 |
| 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 |
| 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 |
| 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 |
| 225 | 225 | 225 | 225</ | | | | | | | | | | | | |

[illegible]

Data amb 14.70 pda
Data amb 537.0 R
Data amb 70.00 %
Data scale 1

| distance (m) | 1831.16 | 1732.05 | 1665.07 | 1598.27 | 1553.91 | 1523.14 | 1505.73 | 1500 | 1505.73 | 1532.14 | 1552.91 | 1594.27 | 1665.07 | 1732.05 | 1801.18 | 1958.11 | 2121.92 | 2303.59 | 2615.17 | 3000 | 3504.93 | 4305.71 | 5795.55 |
|--------------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|
| year angle | 55 | 80 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| frequency | 56 | 60 | 66 | 70 | 75 | 80 | 86 | 90 | 96 | 100 | 106 | 110 | 116 | 120 | 126 | 130 | 136 | 140 | 146 | 150 | 156 | 160 | 166 |
| 80 | 42.16 | 46.56 | 48.74 | 50.11 | 50.4 | 49.26 | 50.96 | 50.68 | 50.25 | 52.05 | 51.68 | 51.44 | 51.27 | 51.18 | 51.18 | 52.83 | 52.38 | 52.00 | 51.86 | 51.18 | 50.77 | 49.2 | 47.72 |
| 100 | 44.16 | 48.56 | 50.74 | 52.11 | 52.4 | 51.26 | 52.96 | 52.68 | 52.25 | 54.05 | 53.68 | 53.44 | 53.27 | 53.18 | 53.18 | 54.83 | 54.38 | 54.00 | 53.86 | 53.18 | 52.77 | 51.26 | 49.72 |
| 120 | 46.16 | 50.56 | 52.74 | 54.11 | 54.4 | 53.26 | 54.96 | 54.68 | 54.25 | 56.05 | 55.68 | 55.44 | 55.27 | 55.18 | 55.18 | 56.83 | 56.38 | 56.00 | 55.86 | 55.18 | 54.77 | 53.26 | 51.72 |
| 140 | 48.16 | 52.56 | 54.74 | 56.11 | 56.4 | 55.26 | 56.96 | 56.68 | 56.25 | 58.05 | 57.68 | 57.44 | 57.27 | 57.18 | 57.18 | 58.83 | 58.38 | 58.00 | 57.86 | 57.18 | 56.77 | 55.26 | 53.72 |
| 160 | 49.16 | 53.56 | 55.74 | 57.11 | 57.4 | 56.26 | 57.96 | 57.68 | 57.25 | 59.05 | 58.68 | 58.44 | 58.27 | 58.18 | 58.18 | 59.83 | 59.38 | 59.00 | 58.86 | 58.18 | 57.77 | 56.26 | 54.72 |
| 180 | 50.16 | 54.56 | 56.74 | 58.11 | 58.4 | 57.26 | 58.96 | 58.68 | 58.25 | 60.05 | 59.68 | 59.44 | 59.27 | 59.18 | 59.18 | 60.83 | 60.38 | 60.00 | 59.86 | 59.18 | 58.77 | 57.26 | 55.72 |
| 200 | 51.16 | 55.56 | 57.74 | 59.11 | 59.4 | 58.26 | 59.96 | 59.68 | 59.25 | 61.05 | 60.68 | 60.44 | 60.27 | 60.18 | 60.18 | 61.83 | 61.38 | 61.00 | 60.86 | 60.18 | 59.77 | 58.26 | 56.72 |
| 220 | 52.16 | 56.56 | 58.74 | 60.11 | 60.4 | 59.26 | 60.96 | 60.68 | 60.25 | 62.05 | 61.68 | 61.44 | 61.27 | 61.18 | 61.18 | 62.83 | 62.38 | 62.00 | 61.86 | 61.18 | 60.77 | 59.26 | 57.72 |
| 240 | 53.16 | 57.56 | 59.74 | 61.11 | 61.4 | 60.26 | 61.96 | 61.68 | 61.25 | 63.05 | 62.68 | 62.44 | 62.27 | 62.18 | 62.18 | 63.83 | 63.38 | 63.00 | 62.86 | 62.18 | 61.77 | 60.26 | 58.72 |
| 260 | 54.16 | 58.56 | 60.74 | 62.11 | 62.4 | 61.26 | 62.96 | 62.68 | 62.25 | 64.05 | 63.68 | 63.44 | 63.27 | 63.18 | 63.18 | 64.83 | 64.38 | 64.00 | 63.86 | 63.18 | 62.77 | 61.26 | 59.72 |
| 280 | 55.16 | 59.56 | 61.74 | 63.11 | 63.4 | 62.26 | 63.96 | 63.68 | 63.25 | 65.05 | 64.68 | 64.44 | 64.27 | 64.18 | 64.18 | 65.83 | 65.38 | 65.00 | 64.86 | 64.18 | 63.77 | 62.26 | 60.72 |
| 300 | 56.16 | 60.56 | 62.74 | 64.11 | 64.4 | 63.26 | 64.96 | 64.68 | 64.25 | 66.05 | 65.68 | 65.44 | 65.27 | 65.18 | 65.18 | 66.83 | 66.38 | 66.00 | 65.86 | 65.18 | 64.77 | 63.26 | 61.72 |
| 320 | 57.16 | 61.56 | 63.74 | 65.11 | 65.4 | 64.26 | 65.96 | 65.68 | 65.25 | 67.05 | 66.68 | 66.44 | 66.27 | 66.18 | 66.18 | 67.83 | 67.38 | 67.00 | 66.86 | 66.18 | 65.77 | 64.26 | 62.72 |
| 340 | 58.16 | 62.56 | 64.74 | 66.11 | 66.4 | 65.26 | 66.96 | 66.68 | 66.25 | 68.05 | 67.68 | 67.44 | 67.27 | 67.18 | 67.18 | 68.83 | 68.38 | 68.00 | 67.86 | 67.18 | 66.77 | 65.26 | 64.22 |
| 360 | 59.16 | 63.56 | 65. | | | | | | | | | | | | | | | | | | | | |

| log | 218 | |
|-----|-----|--|
| 1 | 1 | |
| 2 | 1 | |
| 3 | 1 | |
| 4 | 1 | |
| 5 | 1 | |
| 6 | 1 | |
| 7 | 1 | |
| 8 | 1 | |
| 9 | 1 | |
| 10 | 1 | |
| 11 | 1 | |
| 12 | 1 | |
| 13 | 1 | |
| 14 | 1 | |
| 15 | 1 | |
| 16 | 1 | |
| 17 | 1 | |
| 18 | 1 | |
| 19 | 1 | |
| 20 | 1 | |
| 21 | 1 | |
| 22 | 1 | |
| 23 | 1 | |
| 24 | 1 | |
| 25 | 1 | |
| 26 | 1 | |
| 27 | 1 | |
| 28 | 1 | |
| 29 | 1 | |
| 30 | 1 | |
| 31 | 1 | |
| 32 | 1 | |
| 33 | 1 | |
| 34 | 1 | |
| 35 | 1 | |
| 36 | 1 | |
| 37 | 1 | |
| 38 | 1 | |
| 39 | 1 | |
| 40 | 1 | |
| 41 | 1 | |
| 42 | 1 | |
| 43 | 1 | |
| 44 | 1 | |
| 45 | 1 | |
| 46 | 1 | |
| 47 | 1 | |
| 48 | 1 | |
| 49 | 1 | |
| 50 | 1 | |
| 51 | 1 | |
| 52 | 1 | |
| 53 | 1 | |
| 54 | 1 | |
| 55 | 1 | |
| 56 | 1 | |
| 57 | 1 | |
| 58 | 1 | |
| 59 | 1 | |
| 60 | 1 | |
| 61 | 1 | |
| 62 | 1 | |
| 63 | 1 | |
| 64 | 1 | |
| 65 | 1 | |
| 66 | 1 | |
| 67 | 1 | |
| 68 | 1 | |
| 69 | 1 | |
| 70 | 1 | |
| 71 | 1 | |
| 72 | 1 | |
| 73 | 1 | |
| 74 | 1 | |
| 75 | 1 | |
| 76 | 1 | |
| 77 | 1 | |
| 78 | 1 | |
| 79 | 1 | |
| 80 | 1 | |
| 81 | 1 | |
| 82 | 1 | |
| 83 | 1 | |
| 84 | 1 | |
| 85 | 1 | |
| 86 | 1 | |
| 87 | 1 | |
| 88 | 1 | |
| 89 | 1 | |
| 90 | 1 | |
| 91 | 1 | |
| 92 | 1 | |
| 93 | 1 | |
| 94 | 1 | |
| 95 | 1 | |
| 96 | 1 | |
| 97 | 1 | |
| 98 | 1 | |
| 99 | 1 | |
| 100 | 1 | |

| Response (1) | 1831.16 | 1732.05 | 1655.07 | 1594.27 | 1552.91 | 1523.14 | 1506.73 | 1500 | 1506.73 | 1523.14 | 1552.91 | 1594.27 | 1655.07 | 1732.05 | 1831.16 | 1854.11 | 2121.32 | 2233.58 | 2615.17 | 3000 | 3540.32 | 4308.71 | 5795.55 |
|--------------|---------|---------|---------|---------|---------|---------|---------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------|---------|---------|---------|
| new angle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| freq | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | | | | | | | | | | | | | | | |

489

OASPI

490

Data ambisi 14.70 pada
Data ambisi 537.0 A
Data ambisi 70.00%
Data scale 1

[illegible]

[illegible]

[illegible]

50% L, 12TH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

[illegible]

Data amb 14.30 pais
 Data amb 538.0 R
 Data amb 70.00%
 Data scale 1

distance: (i)
150
55

| | |
|--------------|----|
| yaw angle | 55 |
| roll angle (| 0 |
| frequency | 55 |

| | |
|-----|-------|
| 80 | 61.53 |
| 100 | 61.28 |

| | |
|-----|-------|
| 130 | 63.53 |
| 160 | 64.02 |
| 200 | 65.94 |

| | |
|-----|-------|
| 200 | 65.94 |
| 250 | 68.56 |
| 320 | 67.68 |

| | |
|-----|-------|
| 400 | 67.51 |
| 500 | 68.3 |
| 630 | 68.22 |

630 69.22
800 69.19
1000 69.04

| | |
|------|-------|
| 1300 | 89.34 |
| 1500 | 89.08 |
| 2000 | 88.84 |

| | |
|------|-------|
| 2000 | 69.64 |
| 2500 | 68.57 |
| 3200 | 67.57 |

| | |
|------|-------|
| 4000 | 67.33 |
| 5000 | 65.92 |
| 6000 | 65.84 |

| | |
|-------|-------|
| 6300 | 62.84 |
| 8000 | 64.28 |
| 10000 | 61.98 |

| | |
|-------|------|
| QASPL | 50.8 |
|-------|------|

[illegible]

| Q | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 | Q16 | Q17 | Q18 | Q19 | Q20 | Q21 | Q22 | Q23 | Q24 | Q25 | Q26 | Q27 | Q28 | Q29 | Q30 | Q31 | Q32 | Q33 | Q34 | Q35 | Q36 | Q37 | Q38 | Q39 | Q40 | Q41 | Q42 | Q43 | Q44 | Q45 | Q46 | Q47 | Q48 | Q49 | Q50 | Q51 | Q52 | Q53 | Q54 | Q55 | Q56 | Q57 | Q58 | Q59 | Q60 | Q61 | Q62 | Q63 | Q64 | Q65 | Q66 | Q67 | Q68 | Q69 | Q70 | Q71 | Q72 | Q73 | Q74 | Q75 | Q76 | Q77 | Q78 | Q79 | Q80 | Q81 | Q82 | Q83 | Q84 | Q85 | Q86 | Q87 | Q88 | Q89 | Q90 | Q91 | Q92 | Q93 | Q94 | Q95 | Q96 | Q97 | Q98 | Q99 | Q100 |
|---|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | |

Scenario: Fly-over, full-scale, 1500' altitude, standard day
Processing date: Wed Aug 20 04:21:10 1997

| | |
|------------|------------|
| Data ambn | 14.70 pais |
| Data ambn | \$37.0 FI |
| Data ambn | 70.00% |
| Data scale | 1 |

[illegible]

502

Data ambis 14.30 pada
Data ambis 536.0 Pa
Data ambis 70.00%
Data scale 1

[illegible]

| | |
|------------|----------------------------|
| rdg | 396 |
| run | 1 |
| test_prog | Allison96 |
| test_num | 9 |
| test_facil | LePC APL |
| test_cust | Allison |
| lead_sera | Kathy Boyd |
| lead_scou | Kathy Boyd |
| lead_engin | Riley Castner |
| natrod | NATR but wedge |
| natrod | JER w/ external supplement |

bedtime 20:03:19
Scenario: Fly-over, full-scale, 1500' sideline, standard day
 Processing date: Wed Aug 20 04:27:12 1997

Data sample 14.70 psia
Data sample 537.0 A
Data sample 70.00%[illegible]

| distance (| 1831.16 | 1732.05 | 1665.07 | 1596.27 | 1553.91 | 1523.14 | 1505.73 | 1500 | 1505.73 | 1523.14 | 1552.91 | 1596.27 | 1655.07 | 1722.05 | 1831.16 | 1956.11 | 2121.32 | 2333.59 | 2615.17 | 3000 | 3569.0 | 4385.71 | 5795.55 |
|--------------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|---------|---------|
| year angle (| 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 145 | 155 | 160 | 165 | 170 | 175 |
| frequency | 15 | 30 | 45 | 60 | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 195 | 210 | 225 | 240 | 255 | 270 | 285 | 300 | 315 | 330 | 345 |
| 10 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 20 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 30 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 40 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 50 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 60 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 70 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 80 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 90 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 100 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 110 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 120 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 130 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101.69 | 106.69 | 111.98 | 117.57 | 123.46 | 129.65 | 136.15 | 142.96 |
| 140 | 59.41 | 60.45 | 61.75 | 63.28 | 65.05 | 67.08 | 69.36 | 71.89 | 74.67 | 77.71 | 81.01 | 84.58 | 88.43 | 92.56 | 96.98 | 101 | | | | | | | |

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bctime 20:48:07
 **Scenario: Fly-over, full-scale, 1500' sideline, standard day
 Processing date: Wed Aug 20 04:34:37 1997

Data embed 14.70 ps/s
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Data embed 70.00%
Data scale 1

| distance (m) | 1831.16 | 1732.05 | 1655.07 | 1594.27 | 1552.81 | 1523.14 | 1505.73 | 1500 | 1505.73 | 1523.14 | 1552.81 | 1594.27 | 1655.07 | 1732.05 | 1831.16 | 1958.11 | 2121.32 | 2353.59 | 2613.17 | 3000 | 3549.33 | 4385.71 | 5795.55 |
|--------------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|
| angle (°) | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| frequency | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| 100 | 47.11 | 51.28 | 51.82 | 51.89 | 52.04 | 51.95 | 52.04 | 52.17 | 52.26 | 52.34 | 52.41 | 52.48 | 52.54 | 52.60 | 52.65 | 52.70 | 52.74 | 52.77 | 52.80 | 52.83 | 52.85 | 52.87 | 52.89 |
| 120 | 44.84 | 48.84 | 49.48 | 49.68 | 49.84 | 49.95 | 50.04 | 50.12 | 50.19 | 50.26 | 50.33 | 50.39 | 50.45 | 50.50 | 50.55 | 50.60 | 50.64 | 50.68 | 50.71 | 50.74 | 50.76 | 50.78 | 50.80 |
| 140 | 42.95 | 46.84 | 47.58 | 47.84 | 48.04 | 48.19 | 48.32 | 48.44 | 48.54 | 48.64 | 48.73 | 48.81 | 48.89 | 48.96 | 49.03 | 49.10 | 49.16 | 49.22 | 49.27 | 49.31 | 49.34 | 49.37 | 49.39 |
| 160 | 41.46 | 45.28 | 46.02 | 46.28 | 46.54 | 46.75 | 46.92 | 47.07 | 47.20 | 47.32 | 47.43 | 47.53 | 47.62 | 47.70 | 47.78 | 47.85 | 47.92 | 47.98 | 48.04 | 48.08 | 48.11 | 48.14 | 48.16 |
| 180 | 40.26 | 44.02 | 44.76 | 45.02 | 45.28 | 45.50 | 45.68 | 45.84 | 45.99 | 46.12 | 46.24 | 46.35 | 46.45 | 46.54 | 46.62 | 46.69 | 46.75 | 46.81 | 46.86 | 46.90 | 46.93 | 46.96 | 46.98 |
| 200 | 39.26 | 42.96 | 43.70 | 43.96 | 44.22 | 44.44 | 44.62 | 44.78 | 44.93 | 45.07 | 45.20 | 45.32 | 45.43 | 45.53 | 45.62 | 45.69 | 45.75 | 45.81 | 45.86 | 45.90 | 45.93 | 45.96 | 45.98 |
| 220 | 38.42 | 42.06 | 42.80 | 43.06 | 43.32 | 43.54 | 43.72 | 43.88 | 44.03 | 44.17 | 44.30 | 44.42 | 44.53 | 44.63 | 44.72 | 44.79 | 44.85 | 44.91 | 44.96 | 44.99 | 45.02 | 45.05 | 45.07 |
| 240 | 37.72 | 41.30 | 42.04 | 42.30 | 42.56 | 42.78 | 42.96 | 43.12 | 43.27 | 43.41 | 43.54 | 43.66 | 43.77 | 43.87 | 43.96 | 44.03 | 44.09 | 44.15 | 44.20 | 44.24 | 44.27 | 44.30 | 44.32 |
| 260 | 37.16 | 40.68 | 41.42 | 41.68 | 41.94 | 42.16 | 42.34 | 42.50 | 42.65 | 42.79 | 42.92 | 43.04 | 43.15 | 43.25 | 43.34 | 43.41 | 43.47 | 43.53 | 43.58 | 43.62 | 43.65 | 43.68 | 43.70 |
| 280 | 36.72 | 40.18 | 40.92 | 41.18 | 41.44 | 41.66 | 41.84 | 42.00 | 42.15 | 42.29 | 42.42 | 42.54 | 42.65 | 42.75 | 42.84 | 42.91 | 42.97 | 43.03 | 43.08 | 43.12 | 43.15 | 43.18 | 43.20 |
| 300 | 36.38 | 39.78 | 40.52 | 40.78 | 41.04 | 41.26 | 41.44 | 41.60 | 41.75 | 41.89 | 42.02 | 42.14 | 42.25 | 42.35 | 42.44 | 42.51 | 42.57 | 42.63 | 42.68 | 42.72 | 42.75 | 42.78 | 42.80 |
| 320 | 36.12 | 39.46 | 40.20 | 40.46 | 40.72 | 40.94 | 41.12 | 41.28 | 41.43 | 41.57 | 41.70 | 41.82 | 41.93 | 42.03 | 42.12 | 42.19 | 42.25 | 42.31 | 42.36 | 42.40 | 42.43 | 42.46 | 42.48 |
| 340 | 35.92 | 39.20 | 39.94 | 40.20 | 40.46 | 40.68 | 40.86 | 41.02 | 41.17 | 41.31 | 41.44 | 41.56 | 41.67 | 41.77 | 41.86 | 41.93 | 41.99 | 42.05 | 42.10 | 42.14 | 42.17 | 42.20 | 42.22 |
| 360 | 35.76 | 38.98 | 39.72 | 39.98 | 40.24 | 40.46 | 40.64 | 40.80 | 40.95 | 41.09 | 41.22 | 41.34 | 41.45 | 41.55 | 41.64 | 41.71 | 41.77 | 41.83 | 41.88 | 41.92 | 41.95 | 41.98 | 42.00 |
| 380 | 35.64</ | | | | | | | | | | | | | | | | | | | | | | |

test_long Allison 407
 test_num Allison 3
 test_fac LERC APL
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 lead_jero Kathy Boyd
 lead_mco Kathy Boyd
 lead_eng Ray Cashner
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 test_id JER w/ external supplement
 test_id LONG
 test_id SHOT

41.228

35.02

78.39

scale 4

vd 1018.88

m01 0.29615

parm 14.2502

lamb 487.292

fluried 87.51

windsh 1.1298

repc 1.619

prc 24.7811

prc 25.8211

wcsc 3.518

wcscb 17.427

tic 1389.01

ltb 501.787

plms 23.7251

lmtz 656.043

meuprd 0.811358

grndsp 1.1442.3

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[Flyover data point L for 50%L, 12TH (file T407.xls) not processed]

50%L, 16UH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

526

Data amb= 14.70 para
Data amb= 537.0 R
Data amb= 70.00%
Data scale 1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
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Date: 70.00%
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| distance (°) | yaw angle | roll angle (°) |
|--------------|-----------|----------------|
| 150 | 55 | 0 |

| frequency | 55 |
|-----------|-------|
| 80 | 79.94 |
| 100 | 81.02 |
| 130 | 82.34 |

| | |
|-----|-------|
| 160 | 83.92 |
| 200 | 84.68 |
| 250 | 84.36 |
| 320 | 85.32 |

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|-----|-------|
| 400 | 84.83 |
| 500 | 85.25 |
| 630 | 85.09 |
| 800 | 85.99 |

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| 1000 | 86.04 |
| 1300 | 85.77 |
| 1600 | 86.4 |
| 2000 | 86.33 |

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| 2500 | 85.88 |
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| 4000 | 85.05 |
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|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | | | | | | | | | | | | | |

| | |
|------------|------------|
| Data embis | 14.30 pais |
| Data embis | 538.0 R |
| Data embis | 70.00% |
| Data scale | 1 |

[illegible]

| | |
|------------|----------------------------|
| dog | 124 |
| gun | 1 |
| test_prog | Alison86 |
| test_num | 3 |
| test_fact | LeRC API |
| test_cus1 | Alison |
| test_zero | Kathy Boyd |
| test_acou | Kathy Boyd |
| test_eng1 | Ray Cashner |
| test_wedge | NATR full wedge |
| test_suppl | JER w/ external supplement |

[illegible]

Days until 14.70 o/sia

Data diambil 537.0 R

| | |
|--------------|--------|
| Delta ambien | 70.00% |
|--------------|--------|

Data scale

1831 18

| distance (m) | 55 |
|--------------|----|
| yaw angle | |

roll angle (°) 0

frequency

88 54.47

130 55.93

100 56.88

200 57.63

| | |
|-----|-------|
| 250 | 58.13 |
| 730 | 59.32 |

४४३ ४४४

500 59.07

50.30

| | |
|-------|-------|
| 53.44 | 800 |
| 53.51 | 1,000 |

| | |
|------|-------|
| 1000 | 59.51 |
| 1900 | 59.02 |

| | |
|------|-------|
| 1500 | 59.56 |
| 1600 | 59.56 |

2000 58.85

| | |
|------|-------|
| 2500 | 55.82 |
| 5000 | 64.7 |

| | |
|------|------|
| 5200 | 54.7 |
| 4000 | 50.2 |

43.37

32.81 0000

9.33

0

| | |
|-------|--------|
| 0 | 000001 |
| 70.00 | 000001 |
| 70.00 | 000001 |

PAUL 81.13

1

541

542

[illegible]

[illegible]

Data ambient 14.70 psia
Data ambient 537.0 R
Data ambient 70.00%
Data scale 1

[illegible]

| | |
|-----------|----------------------------|
| rdg | 131 |
| run | 1 |
| test_prog | Allison6 |
| test_num | 3 |
| test_faci | LeRC APL |
| test_cust | Allison |
| test_sero | Kathy Boyd |
| test_acou | Kathy Boyd |
| test_engr | Ray Cashner |
| testbld | NATR full wedge |
| ribbld | JER w/ external supplement |

Scenario: Fly-over, full-scale, 1500' timeline, standard day
Processing date: Tue Aug 19 17:24:17 1997
bchtime 21:18:28

Data ambis 14.70 pela
Data ambis 537.0 ft
Data ambis 70.00%
Data scale

[illegible]

50%L, 20UH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

[illegible]

bldtime 21:15:13
 --Scenario: 150 foot arc; 77F, 70%; Full scale; Third-octave SPL
 Wed Aug 20 02:31:58 1997
 Concession date:

| | |
|-------------|------------|
| Data ambisi | 14.30 pass |
| Data ambisi | 538.0 R |
| Data ambisi | 70.00% |
| Data ambisi | 1 |

[illegible]

[illegible]

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89</ | | | | | | | | | | | |

560

Scenario: 150 to
Processing data:

| | |
|-------------|------------|
| Data ambiti | 14.30 pais |
| Data ambiti | 538.0 R |
| Data ambiti | 70.00% |
| Data scale | ! |

| distance (°) | 150 | 150 | 150 | 150 | 70 |
|--------------|-----|-----|-----|-----|----|
| distance (°) | 150 | 150 | 150 | 150 | 70 |

1. 1990

| frequency | 55 | 60 | 65 | 70 |
|-----------|----|----|----|----|
|-----------|----|----|----|----|

| | | | | |
|-----|-------|-------|-------|-------|
| 80 | 62.63 | 64.18 | 67.03 | 69.6 |
| .33 | 67.78 | 69.64 | 69.77 | 69.81 |

| | 100 | 67.29 | 68.37 | 69.37 | 69.46 |
|-----|-----|-------|-------|-------|-------|
| 100 | | | | | |
| 130 | | 75.79 | 70.28 | 69.3 | 69.46 |

| | | | | |
|-----|-------|-------|-------|-------|
| 160 | 71.10 | 71.45 | 71.17 | 71.02 |
|-----|-------|-------|-------|-------|

| | 70.1 | 71.15 | 71.74 | 72.13 |
|-----|------|-------|-------|-------|
| 200 | | | | |
| 200 | | | | |
| 200 | | | | |

| | | | | |
|-----|-------|-------|-------|-------|
| 250 | 71.66 | 72.53 | 73.14 | 73.56 |
| 320 | 72.67 | 73.69 | 74.51 | 74.91 |

| | | | | |
|-----|-------|-------|-------|-------|
| 400 | 72.46 | 73.97 | 74.61 | 75.39 |
|-----|-------|-------|-------|-------|

| | | | | |
|-----|-------|------|-------|-------|
| 500 | 72.94 | 74.8 | 75.96 | 76.48 |
| 500 | 72.94 | 74.8 | 75.96 | 76.48 |
| 500 | 72.94 | 74.8 | 75.96 | 76.48 |

| | | | | |
|-----|-------|-------|-------|-------|
| 830 | 73.25 | 76.05 | 77.24 | 77.25 |
| 800 | 75.14 | 77.84 | 78.68 | 78.68 |

| | | | | |
|------|-------|-------|-------|-------|
| 1000 | 75.75 | 78.83 | 79.38 | 79.04 |
|------|-------|-------|-------|-------|

| | 1900 | 78.46 | 79.48 | 80.11 | 80.18 |
|------|------|-------|-------|-------|-------|
| 1900 | | 78.46 | 79.48 | 80.11 | 80.18 |
| 1905 | | 78.72 | 80.12 | 80.73 | 80.55 |

| | 1800 | 76.77 | 60.72 | 50.72 |
|------|--|------------------------------------|----------------------|-------|
| 2000 | 75.99 <td>79.63<td>90.36<td>50.41</td></td></td> | 79.63 <td>90.36<td>50.41</td></td> | 90.36 <td>50.41</td> | 50.41 |

| | | | | |
|------|-------|-------|-------|-------|
| 2500 | 74.66 | 78.06 | 78.79 | 78.81 |
|------|-------|-------|-------|-------|

| | | | | |
|------|-------|-------|-------|-------|
| 3200 | 72.45 | 75.4 | 76.29 | 78.54 |
| 4000 | 70.87 | 72.72 | 74.81 | 77.92 |

| | | | |
|------|-------|-------|-------|
| 4000 | 70.97 | 73.72 | 74.91 |
| 5000 | 69.89 | 72.96 | 73.63 |

| | | | | |
|------|------|------|-------|-------|
| 6300 | 68.6 | 71.9 | 73.06 | 72.61 |
|------|------|------|-------|-------|

| | 8000 | 68.03 | 71.44 | 72.44 | 71.99 |
|--------|-------|-------|-------|-------|-------|
| 1.0000 | 64.25 | 69.01 | 69.88 | 69.78 | |

| | | | | |
|-------|-------|-------|-------|-------|
| 10000 | 98.23 | 98.01 | 98.53 | 98.79 |
| QASPI | 98.52 | 88.95 | 89.89 | 89.73 |


```

run 323
test_dmg Allison6
test_run 3
test_tecr LARC AP1
test_cstr Allison
test_sens Kary Boyd
test_cstr Kary Boyd
test_engg Ray Canard
rightd MATN full wedge
rightd JER w external supplement
mazbid NS20
mazbid SH50
anoz 41.226
smisc 35.02
armab 78.39
acale 4
vdi 897.23
vdi 875.65
vdi 875.65
vdi 14.4817
lamb 482.608
rhumid 53.87
whon1 0
rpsc 1.537
rpsc 1.815
pac 22.2276
pab 23.3556
wacac 3.135
wacab 1.9.862
wacab 1.79.862
wacab 1.79.862
rc 483.551
gmsr 23.1877
gmsr 626.824
mupnd 0.763474
grawp 17635.9
badch'n [28] 306
encasre 28 Nov 86
encasre 21.32.04
DACScale 25 Nov 86
DACScale 21.32.04
DACScale 21.32.04
backbone 28 Nov 86
backbone 21.32.04
**Scenario: 150 foot arc; 77F, 70% Full scale; Third-octave SPL
Processing date: Wed Aug 20 02:34:45 1997

```

Data amb: 14.30 pas

Data amb: 536.0 R

Data amb: 70.00%

Data scale 1

Distance: (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

freq angle (

| | |
|-----------|----------------------------|
| dg | 323 |
| un | 1 |
| test_prog | Alison08 |
| test_num | 3 |
| test_incl | LePC API |
| test_cust | Alison |
| read_aero | Kathy Boyd |
| read_acou | Kathy Boyd |
| read_engr | Ray Cassner |
| matbid | NATR full wedge |
| mpbid | JER w/ external supplement |

bedtime 21:32:04
 ...Scenario: Fly-over, lat-scale, 1500 midline, standard day
 Processing date: Wed Aug 20 02:34:53 1997

Data sample 14.70 pages
 Data sample 537.0 R
 Data sample 70.00%
 Data sample 1

[illegible]

| Group | Age | Sex | Weight (kg) | Height (cm) | Body Condition Score | Health Status | Notes |
|-------|-----|-----|-------------|-------------|----------------------|---------------|----------------|
| 1 | 322 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 2 | 323 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 3 | 324 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 4 | 325 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 5 | 326 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 6 | 327 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 7 | 328 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 8 | 329 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 9 | 330 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 10 | 331 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 11 | 332 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 12 | 333 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 13 | 334 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 14 | 335 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 15 | 336 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 16 | 337 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 17 | 338 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 18 | 339 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 19 | 340 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 20 | 341 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 21 | 342 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 22 | 343 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 23 | 344 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 24 | 345 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 25 | 346 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 26 | 347 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 27 | 348 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 28 | 349 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 29 | 350 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 30 | 351 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 31 | 352 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 32 | 353 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 33 | 354 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 34 | 355 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 35 | 356 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 36 | 357 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 37 | 358 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 38 | 359 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 39 | 360 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 40 | 361 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 41 | 362 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 42 | 363 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 43 | 364 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 44 | 365 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 45 | 366 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 46 | 367 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 47 | 368 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 48 | 369 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 49 | 370 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 50 | 371 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 51 | 372 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 52 | 373 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |
| 53 | 374 | ♂ | 10.5 | 110 | 3 | Good | Alison's group |
| 54 | 375 | ♀ | 10.5 | 110 | 3 | Good | Alison's group |

Date embil: 14.30 pela
Data embil: 536.0 R
Data embil: 70.00%
Data scale: 1

150 7-1-0000-7

55
130

roll angle (°)

| frequency | 55 |
|-----------|----|
| 77.1 | 80 |

100 77.77

| | |
|-----|-------|
| 130 | 78.99 |
| 160 | 80.7 |

200 80 53

250 80 63

| | |
|-----|-------|
| 320 | 02.09 |
| 400 | 01.41 |

500 81.97

| | |
|-----|-------|
| 630 | 02.03 |
| 600 | 03.16 |

1000 84.91

| | |
|------|-------|
| 1300 | 85.75 |
| 1600 | 88.59 |

2000 57.51

| | |
|------|-------|
| 2500 | 87.34 |
| 1200 | 87.78 |

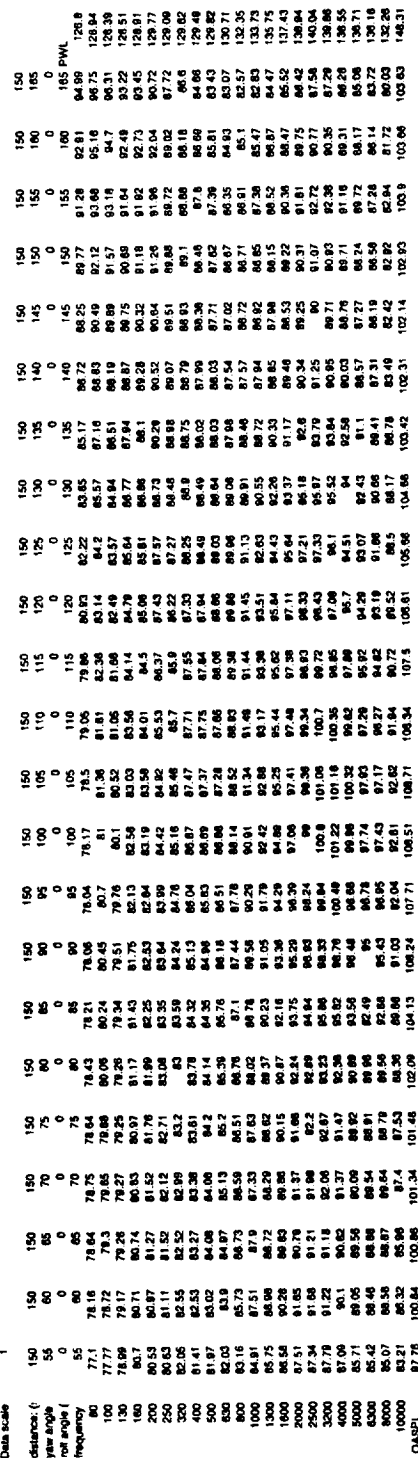
4000 87.09

| | |
|------|-------|
| 5000 | 85.71 |
| 1300 | 85.43 |

83.42 85.07

10000 83.21

74SYO 94.78



NASA/CR—2002-210823/VOL2

565

[illegible]

| | | | |
|------|----------|-----------|---|
| 3205 | un | Alston98 | 3 |
| 3206 | west_num | LEPC APFL | 3 |
| 3207 | west_num | LEPC APFL | 3 |
| 3208 | west_num | LEPC APFL | 3 |
| 3209 | west_num | LEPC APFL | 3 |
| 3210 | west_num | LEPC APFL | 3 |
| 3211 | west_num | LEPC APFL | 3 |
| 3212 | west_num | LEPC APFL | 3 |
| 3213 | west_num | LEPC APFL | 3 |
| 3214 | west_num | LEPC APFL | 3 |
| 3215 | west_num | LEPC APFL | 3 |
| 3216 | west_num | LEPC APFL | 3 |
| 3217 | west_num | LEPC APFL | 3 |
| 3218 | west_num | LEPC APFL | 3 |
| 3219 | west_num | LEPC APFL | 3 |
| 3220 | west_num | LEPC APFL | 3 |
| 3221 | west_num | LEPC APFL | 3 |
| 3222 | west_num | LEPC APFL | 3 |
| 3223 | west_num | LEPC APFL | 3 |
| 3224 | west_num | LEPC APFL | 3 |
| 3225 | west_num | LEPC APFL | 3 |
| 3226 | west_num | LEPC APFL | 3 |
| 3227 | west_num | LEPC APFL | 3 |
| 3228 | west_num | LEPC APFL | 3 |
| 3229 | west_num | LEPC APFL | 3 |
| 3230 | west_num | LEPC APFL | 3 |
| 3231 | west_num | LEPC APFL | 3 |
| 3232 | west_num | LEPC APFL | 3 |
| 3233 | west_num | LEPC APFL | 3 |
| 3234 | west_num | LEPC APFL | 3 |
| 3235 | west_num | LEPC APFL | 3 |
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| 3260 | west_num | LEPC APFL | 3 |
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| 3263 | west_num | LEPC APFL | 3 |
| 3264 | west_num | LEPC APFL | 3 |
| 3265 | west_num | LEPC APFL | 3 |
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| 3279 | west_num | LEPC APFL | 3 |
| 3280 | west_num | LEPC APFL | 3 |
| 3281 | west_num | LEPC APFL | 3 |
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| 3296 | west_num | LEPC APFL | 3 |
| 3297 | west_num | LEPC APFL | 3 |
| 3298 | west_num | LEPC APFL | 3 |
| 3299 | west_num | LEPC APFL | 3 |
| 3300 | west_num | LEPC APFL | 3 |

Scenario: 150 Node Arc; 77F, 70%; Full Access, 1140-10400 SFL
Processing date: Wed Aug 20 02:39:35 1997

| | |
|------------|------------|
| Data embol | 14.30 pela |
| Data embol | 536.0 A |
| Data embol | 70.00% |

[illegible]

QASp

571

NASA Lewis Allison AST Jet Noise Test 1996

```

ndg      324
run      1
test_prog Allison6
test_date 19960820
test_loc  LeRC AP1
test_cust Allison
lead_engo Kathy Boyd
lead_acou Kathy Boyd
lead_engr Ray Cassner
naked    MATR full wedge
ngsd     JER w/ external supplement
mzdbd    NS20
mzdbd     nozdb
sncz     41.225
sncz     35.01
sncz     78.39
scale     4
vld      1048.83
m01      0.3012
pamb     14.4204
lamb     481.223
rhumb    52.82
wvvel1   0
nrc      1744
nrc      1888
nrc      2514
p1c      25.1462
wvvel2   4.102
wvvel3   17.838
nc        1362.32
nb        485.455
pmb1     28.0168
lmb1     681.26
lmb2     0.830321
mhzpnd   229681.5
backshn  [05,12,15,6,23,28]
diagrd   3.11
excime    28.8436
DADSale  25 Nov 96
DADSale  22-32:46
bchdrle  22-32:46
bchdrle  26 Nov 96
bchdrle  22-32:46
--Scenario: 150 foot arc; 717, 70%, Full scale, Third-octave SPL
Processing date: Wed Aug 20 02:47:07 1997

```

Data embd 14.30 psia

Data embd 538.0 ft

Data embd 70.00%

Data scale

distance (

year angle (

ref angle (

frequency

100 73.03

130 75.36

160 77.68

200 77.68

250 78.64

300 79.14

400 80.25

500 81.09

630 81.84

800 83.04

1000 85.06

1300 86.72

1600 86.72

2000 88.17

2500 88.35

3200 88.83

4000 89.52

5000 89.78

6300 89.97

8000 89.97

10000 84.7

OASPL

[illegible]

50% L, 20MH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, H, I, J, K, L

576

Scenario: Fly-over, full-scale, 1500 midline, standard day
 Processed date: Wed Aug 20 03:25:27 1997
 bchTime 21:22:08

[illegible]

| | |
|------------|-----------------------------|
| dog | 358 |
| gun | 1 |
| test_prog | Alison08 |
| test_turn | 3 |
| test_facil | LePC API |
| test_curl | Alison |
| test_aero | Kathy Boyd |
| test_aero | Kathy Boyd |
| test_engr | Ray Casner |
| test_wedge | NATRA hull wedge |
| test_JCFR | JCFR w/ external supplement |

Processing date: Wed Aug 20 00:31:26 1997

Data amb 14.70 pela
Data amb 537.0 R
Data amb 70.00%
Data scale 1

[illegible]

| | |
|-------------------------|---|
| Data sample 14.30 pairs | |
| Data sample 538.0 ft | |
| Data sample 70.00% | |
| Data scale | 1 |

586

| Data sample 14.70, pairs | 1831.16 | 1732.05 | 1655.07 | 1598.27 | 1550.81 | 1523.14 | 1505.75 | 1505.75 | 1505.75 | 1523.14 | 1552.01 | 1598.27 | 1655.07 | 1732.05 | 1831.16 | 1954.11 | 2121.32 | 2333.59 | 2615.17 | 3000 | 3549.3 | 4205.71 | 5795.55 |
|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|--------|---------|---------|
| Data sample 537.0 R | | | | | | | | | | | | | | | | | | | | | | | |
| Data sample 70.00% | | | | | | | | | | | | | | | | | | | | | | | |
| Data scale | | | | | | | | | | | | | | | | | | | | | | | |
| distance (t | 56 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| year angle (t | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| frequency | 44.84 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50.45 | 50.55 | 50.65 | 50.75 | 50.85 |
| 100 | 47.35 | 48.86 | 48.85 | 48.94 | 49.05 | 49.15 | 49.25 | 49.35 | 49.45 | 49.55 | 49.65 | 49.75 | 49.85 | 49.95 | 50.05 | 50.15 | 50.25 | 50.35 | 50 | | | | |

587

Delta ambient 14.30 psia
Delta ambient 538.0 R
Delta ambient 70.00%
Delta scale 1

Distance: (ft)

frequency 55

| | |
|-----|-------|
| 100 | 77.74 |
| 130 | 79.33 |

| | |
|-----|-------|
| 200 | 80.92 |
| 250 | 80.53 |

400 81.07

82.75 83.00

| | |
|------|-------|
| 1300 | 24.74 |
| 1400 | 25.24 |

2500 86.94

| | |
|------|-------|
| 4000 | 87.82 |
| 5000 | 87.24 |

| | |
|-------|-------|
| 5000 | 87.05 |
| 10000 | 85.72 |

589

[illegible]

[illegible]

Wed Aug 29 03:42:33 1997

Scanning: Fly-04
Processing date:

[illegible]

[illegible]

[illegible]

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | | | | | | | | | | | | | | | |

50%L, 20DH

150 ft Polar: SPL(θ , f), OASPL(θ), PWL(f), OAPWL
1500 ft Flyover: SPL(θ , f), OASPL(θ), PNL(θ), EPNL, PWL(f), OAPWL
Operating Conditions: A, B, C, D, E, F, G, H, I, J, K, L

[illegible]

601

Data ambis 14.70 pais
Data ambis 537.0 R
Data ambis 70.00%
Data scale 1

| | | |
|-----|-----|--|
| 19 | 252 | |
| 1 | 1 | |
| 2 | 1 | |
| 3 | 1 | |
| 4 | 1 | |
| 5 | 1 | |
| 6 | 1 | |
| 7 | 1 | |
| 8 | 1 | |
| 9 | 1 | |
| 10 | 1 | |
| 11 | 1 | |
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| 13 | 1 | |
| 14 | 1 | |
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| 95 | 1 | |
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| 97 | 1 | |
| 98 | 1 | |
| 99 | 1 | |
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| 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 |
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| Date (year) | 1801-18 | 1819-26 | 1827-34 | 1835-42 | 1843-50 | 1851-58 | 1859-66 | 1867-74 | 1875-82 | 1883-90 | 1891-98 | 1900 | 1901-08 | 1909-16 | 1917-24 | 1925-32 | 1933-40 | 1941-48 | 1949-56 | 1957-64 | 1965-72 | 1973-80 | 1981-88 | 1989-96 | 1997-04 | 2005-12 | 2013-20 | 2021-28 | 2029-36 | 2037-44 | 2045-52 | 2053-60 | 2061-68 | 2069-76 | 2077-84 | 2085-92 | 2093-00 | 2101-08 | 2109-16 | 2117-24 | 2125-32 | 2133-40 | 2141-48 | 2149-56 | 2157-64 | 2165-72 | 2173-80 | 2181-88 | 2189-96 | 2197-04 | 2205-12 | 2213-20 | 2221-28 | 2229-36 | 2237-44 | 2245-52 | 2253-60 | 2261-68 | 2269-76 | 2277-84 | 2285-92 | 2293-00 | 2301-08 | 2309-16 | 2317-24 | 2325-32 | 2333-40 | 2341-48 | 2349-56 | 2357-64 | 2365-72 | 2373-80 | 2381-88 | 2389-96 | 2397-04 | 2405-12 | 2413-20 | 2421-28 | 2429-36 | 2437-44 | 2445-52 | 2453-60 | 2461-68 | 2469-76 | 2477-84 | 2485-92 | 2493-00 | 2501-08 | 2509-16 | 2517-24 | 2525-32 | 2533-40 | 2541-48 | 2549-56 | 2557-64 | 2565-72 | 2573-80 | 2581-88 | 2589-96 | 2597-04 | 2605-12 | 2613-20 | 2621-28 | 2629-36 | 2637-44 | 2645-52 | 2653-60 | 2661-68 | 2669-76 | 2677-84 | 2685-92 | 2693-00 | 2701-08 | 2709-16 | 2717-24 | 2725-32 | 2733-40 | 2741-48 | 2749-56 | 2757-64 | 2765-72 | 2773-80 | 2781-88 | 2789-96 | 2797-04 | 2805-12 | 2813-20 | 2821-28 | 2829-36 | 2837-44 | 2845-52 | 2853-60 | 2861-68 | 2869-76 | 2877-84 | 2885-92 | 2893-00 | 2901-08 | 2909-16 | 2917-24 | 2925-32 | 2933-40 | 2941-48 | 2949-56 | 2957-64 | 2965-72 | 2973-80 | 2981-88 | 2989-96 | 2997-04 | 3005-12 | 3013-20 | 3021-28 | 3029-36 | 3037-44 | 3045-52 | 3053-60 | 3061-68 | 3069-76 | 3077-84 | 3085-92 | 3093-00 | 3101-08 | 3109-16 | 3117-24 | 3125-32 | 3133-40 | 3141-48 | 3149-56 | 3157-64 | 3165-72 | 3173-80 | 3181-88 | 3189-96 | 3197-04 | 3205-12 | 3213-20 | 3221-28 | 3229-36 | 3237-44 | 3245-52 | 3253-60 | 3261-68 | 3269-76 | 3277-84 | 3285-92 | 3293-00 | 3301-08 | 3309-16 | 3317-24 | 3325-32 | 3333-40 | 3341-48 | 3349-56 | 3357-64 | 3365-72 | 3373-80 | 3381-88 | 3389-96 | 3397-04 | 3405-12 | 3413-20 | 3421-28 | 3429-36 | 3437-44 | 3445-52 | 3453-60 | 3461-68 | 3469-76 | 3477-84 | 3485-92 | 3493-00 | 3501-08 | 3509-16 | 3517-24 | 3525-32 | 3533-40 | 3541-48 | 3549-56 | 3557-64 | 3565-72 | 3573-80 | 3581-88 | 3589-96 | 3597-04 | 3605-12 | 3613-20 | 3621-28 | 3629-36 | 3637-44 | 3645-52 | 3653-60 | 3661-68 | 3669-76 | 3677-84 | 3685-92 | 3693-00 | 3701-08 | 3709-16 | 3717-24 | 3725-32 | 3733-40 | 3741-48 | 3749-56 | 3757-64 | 3765-72 | 3773-80 | 3781-88 | 3789-96 | 3797-04 | 3805-12 | 3813-20 | 3821-28 | 3829-36 | 3837-44 | 3845-52 | 3853-60 | 3861-68 | 3869-76 | 3877-84 | 3885-92 | 3893-00 | 3901-08 | 3909-16 | 3917-24 | 3925-32 | 3933-40 | 3941-48 | 3949-56 | 3957-64 | 3965-72 | 3973-80 | 3981-88 | 3989-96 | 3997-04 | 4005-12 | 4013-20 | 4021-28 | 4029-36 | 4037-44 | 4045-52 | 4053-60 | 4061-68 | 4069-76 | 4077-84 | 4085-92 | 4093-00 | 4101-08 | 4109-16 | 4117-24 | 4125-32 | 4133-40 | 4141-48 | 4149-56 | 4157-64 | 4165-72 | 4173-80 | 4181-88 | 4189-96 | 4197-04 | 4205-12 | 4213-20 | 4221-28 | 4229-36 | 4237-44 | 4245-52 | 4253-60 | 4261-68 | 4269-76 | 4277-84 | 4285-92 | 4293-00 | 4301-08 | 4309-16 | 4317-24 | 4325-32 | 4333-40 | 4341-48 | 4349-56 | 4357-64 | 4365-72 | 4373-80 | 4381-88 | 4389-96 | 4397-04 | 4405-12 | 4413-20 | 4421-28 | 4429-36 | 4437-44 | 4445-52 | 4453-60 | 4461-68 | 4469-76 | 4477-84 | 4485-92 | 4493-00 | 4501-08 | 4509-16 | 4517-24 |
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| 13. ABSTRACT (Maximum 200 words) A comprehensive database for the acoustic and aerodynamic characteristics of several model-scale lobe mixers of bypass ratio 5 to 6 has been created for mixed jet speeds up to 1080 ft/s at typical take-off (TO) conditions of small-to-medium turbofan engines. The flight effect was simulated for Mach numbers up to 0.3. The static thrust performance and plume data were also obtained at typical TO and cruise conditions. The tests were done at NASA Lewis anechoic dome and ASE's Fluidyne Laboratories. The effect of several lobe mixer and nozzle parameters, such as, lobe scalloping, lobe count, lobe penetration and nozzle length was examined in terms of flyover noise at constant altitude and also noise in the reference frame of the nozzle. This volume is divided into three parts: in the first two parts, we collate the plume survey data in graphical form (line, contour and surface plots) and analyze it; in part 3, we tabulate the aerodynamic data for the acoustics tests and the acoustic data in one-third octave band levels. | | | | |
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